

# Public Utilities



*FORTNIGHTLY*



August 14, 1941

THE ARKANSAS VALLEY AUTHORITY

Part I. The Historical Background

By H. W. Blalock

" "

Must Railroads Lose 84 Cents on  
Each Passenger?

By Owen Ely

" "

Electric Power on the Farms Aids  
National Defense

By Harry Slattery

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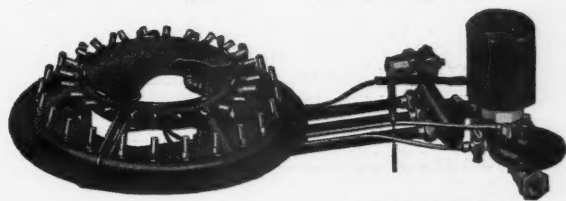
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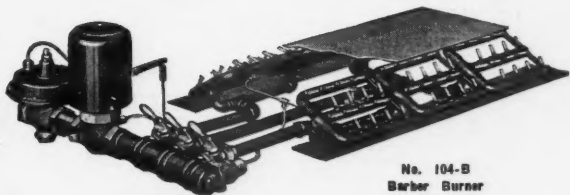
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Financial Editor—OWEN ELY

# Public Utilities Fortnightly



VOLUME XXVIII      August 14, 1941      NUMBER 4

*Contents of previous issues of PUBLIC UTILITIES FORTNIGHTLY can be found by consulting the "Industrial Arts Index" in your library.*

Utilities Almanack .....	193
Railroad Workers .....	(Frontispiece) 194
The Arkansas Valley Authority	
Part I. The Historical Background.....	H. W. Blalock 195
Must Railroads Lose 84 Cents on Each Passenger? .....	Owen Ely 206
Electric Power on the Farms Aids National Defense .....	Harry Slattery 216
Wire and Wireless Communication .....	223
Financial News and Comment .....	Owen Ely 227
What Others Think .....	233
Congress Investigates Natural Gas Act Changes	
An Analysis of Government Business Control	
Is the Southeast Power Shortage Here to Stay?	
The March of Events .....	242
The Latest Utility Rulings .....	250
Public Utilities Reports .....	255
Titles and Index .....	256

## Advertising Section

Pages with the Editors .....	6
In This Issue .....	10
Remarkable Remarks .....	12
Industrial Progress .....	36
Index to Advertisers .....	58

**Q** This magazine is an open forum for the free expression of opinion concerning public utility regulation and allied topics. It is supported by subscription and advertising revenue; it is not the mouth-piece of any group or faction; it is not under the editorial supervision of, nor does it bear the endorsement of, any organization or association. The editors do not assume responsibility for the opinions expressed by its contributors.

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PRICE, 75 CENTS A COPY      ANNUAL SUBSCRIPTION, \$15.00  
AUG. 14, 1941      4

## Beat Rush Schedules with Faster Tools



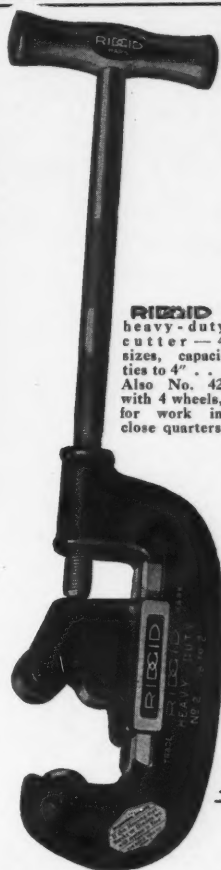
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## Pages with the Editors

ALMOST from the beginning of the present "defense emergency," critics and others, who have never felt too enthusiastic about the Federal rural electrification program, have been sniping at it. They have suggested cutting its appropriation, curtailing its activity, putting it "on ice," and even winding up its affairs.

Two major lines of reasoning have been followed by those who would like to "do something about REA." First, they say, the tremendous expense of the nation's defense effort should postulate a cessation of unnecessary "nondefense spending"—meaning, among other things, REA. Since every businessman must forego business-as-usual and consumers do without consuming-as-usual, it is urged, the government must make its sacrifices in the form of giving up reform-as-usual.

THE second, and somewhat allied line of reasoning critical of the REA, stresses the large amount of copper, steel, tungsten, and other scarce materials which an expanding rural electrification program must subtract from the diminishing supplies of the nation's defense effort. These demands on strategic materials do not stop with the construction of



H. W. BLALOCK

*The AVA is the soundest method of keeping the ARKANSAS TRAVELER at home.*

(SEE PAGE 195)

rural power lines to the farmer's property. The farmer, naturally enough, as soon as he becomes connected wants to put into service refrigerators, radios, plumbing systems, and other appliances which are made out of steel, copper, nickel, etc. \*

IN short, the argument seems to be that REA may be all very well as a phase of normal social progress but it won't hurt farmers, who have gotten along this far without electric service, to do without it a year or two longer so that materials can be better used for the nation's defense effort. So runs the argument in favor of putting REA on the shelf "for the duration."

COMES NOW HARRY SLATTERY, genial chief of the Rural Electrification Administration, to show us the fallacy of such criticism. In an article in this issue (page 216) Mr. SLATTERY finds that the REA program can neither be classified as "nondefense spending" nor as a drain upon scarce strategic supplies. On the contrary, he gives us reasons to believe that the REA program is itself an active phase of building for defense. MR. SLATTERY approaches his subject calmly and with obvious



HARRY SLATTERY

*The farmer is the man behind the man behind the gun.*

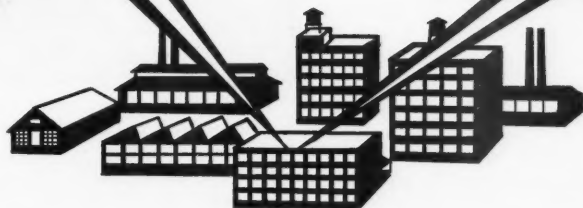
(SEE PAGE 216)

AUG. 14, 1941

Industry needs MORE ELECTRIC HEAT  
to speed up the Defense Program . . .

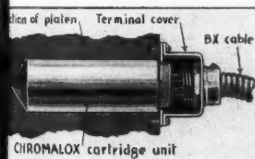
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DUCT WILL REQUIRE A  
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TURE OF 550 DEGREES F."

"AND WE CAN'T GET  
THAT TEMPERATURE  
WITH OUR STEAM-  
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### **A TYPICAL CASE**

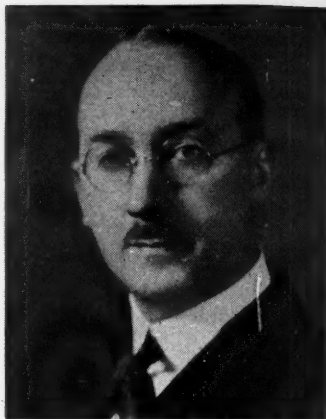
of adapting a plastic molding press to electric heating. Holes are drilled in the platens for insertion of Chromalox cartridge units. This method is often used to obtain higher temperature or more flexible operation and better working conditions.

# **CHROMALOX**

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sincerity. He realizes that in this day of hectic scrambling for appropriations every governmental board or agency strives to tie in its activities with national defense. MR. SLATTERY proceeds to state his case.

BORN in Greenville, South Carolina, in 1887, MR. SLATTERY received his education at Mt. St. Mary's College (Emmitsburg, Maryland), Georgetown University, and George Washington University. He served as secretary to Gifford Pinchot from 1909 to 1912. After that he served with the National Conservation Association until 1923, first as secretary, later as counsel. He began his service with the Interior Department as special assistant to Secretary Lane in 1917, rising to the post of personal assistant to Secretary Ickes during the present administration—in charge of the Public Works Administration. He became Under Secretary of the Interior Department in 1938 and was appointed to his present post of Rural Electrification Administrator in 1939. He has always taken a deep and active interest in all matters affecting conservation and natural resources.



OWEN ELY

*The "carriage trade" is the poorest trade for the railroads.*

(SEE PAGE 206)

ANOTHER phase of the Federal power program which has run into similar criticism on grounds of national defense is the various proposals to construct new navigation or irrigation projects with hydroelectric generating features. Conceding that there may be a shortage of power supply to take care of the unprecedented and unforeseeable demands of the huge armament program, the argument has been made that such colossal hydroelectric projects usually take upwards of three years to complete. By that time, it is suggested, the international issue will probably have been decided, the peak of the defense effort will have passed, and the completion of such projects will then merely add to an oversupply.

We have already heard such arguments in opposition to the proposed St. Lawrence development. We are beginning to hear them in opposition to the proposed Arkansas valley development. Combating these arguments and sympathetically explaining the purpose and value of the proposed Arkansas Valley Authority is a 3-part series of articles by H. W. BLALOCK, the first of which is in this issue.

MR. BLALOCK, author of this series, recently accepted a post as power consultant with the Federal Power Commission in Washington. This follows his recent term as a member of the Arkansas Department of Public Utilities (1937-1941). He is a graduate of the University of Illinois (Ph.D., '31) and was formerly assistant professor of business administration at the University of Arkansas (1931-1937).

OWEN ELY, whose article on unprofitable railroad passenger traffic begins on page 206, is the financial editor of PUBLIC UTILITIES AUG. 14, 1941

FORTNIGHTLY. Following his education at Hamline University (A.B., '10) and Syracuse University (A.M., '11), he began his career as a statistician with the New York Central in 1914 and has since become a statistical analyst for a number of brokerage houses on Wall Street, in addition to making frequent contributions to business and financial publications.

AMONG the important decisions preprinted from *Public Utilities Reports* in the back of this number, may be found the following:

COST allocations are considered by the New York commission, in fixing gas rates, with reference to the question of differentials based on distance from plant, initial block, and classes of consumers. (See page 65.)

INDUSTRIAL rates for gas service, metered through a single meter, to a housing authority have been approved by the Tennessee commission. (See page 100.)

A COMPANY failing to justify payments to affiliates for supply is held by the Federal Power Commission to have failed to sustain the burden of proof as to reasonableness of rates. (See page 102.)

THE Michigan Supreme Court has sustained a commission order reducing intrastate toll rates found to be discriminatory. (See page 111.)

THE next number of this magazine will be out August 28th.

*The Editors*

# There's FAR MORE to this "Figuring Wizard" THAN MEETS THE EYE!



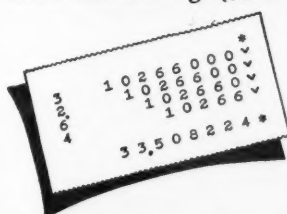
## FOR EXAMPLE:

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## In This Issue



### *In Feature Articles*

The Arkansas Valley Authority, 195.  
Settlement of AVA country, 196.  
Soil conservation, 198.  
Deposits of silt in the Mississippi, 199.  
Region of proposed AVA, 201.  
Control of flood waters, 202.  
Must railroads lose 84 cents on each passenger, 206.  
Passenger department operating ratios, 207.  
Peak of passenger and freight revenues, 208.  
Revenues and expenses of streamlined trains, 211.  
Passenger *v.* freight earnings, 212.  
Electric power on the farms aids national defense, 216.  
Availability of electric service, 219.  
Increasing demand for power, 221.  
Wire and wireless communication, 222.

### *In Financial News*

"Death sentence" litigation looms, 226.  
International Hydro-Electric, 227.  
The "subordination" principle: digest of Supreme Court cases, 229.  
Charts showing electric power production, net income of utilities, utility financing, etc., 232.

### *In What Others Think*

Congress investigates Natural Gas Act changes, 233.

An analysis of government business control, 236.  
Is the Southeast power shortage here to stay, 238.

### *In The March of Events*

FPC power expansion plan, 242.  
Seaway a danger, 242.  
Would sell bonds to RFC, 243.  
SEC prohibits loans, 243.  
Daylight saving in South, 243.  
OPM sets up power unit, 243.  
GRDA reorganization suggested, 244.  
Securities laws, 244.  
News throughout the states, 244.

### *In The Latest Utility Rulings*

Rule limiting liability for errors in telephone directory upheld, 250.  
Controlling influence of subsidiary under Holding Company Act, 250.  
Rates must produce expenses and return on fair value including going value, 251.  
Electric company and hotel company held to be subsidiaries under Holding Company Act, 252.  
Official action of municipal authorities not subject to commission control, 253.  
City's complaint against terminating rate inquiry dismissed, 253.  
Life insurance company granted exemption as temporary holding company, 254.  
Miscellaneous rulings, 254.

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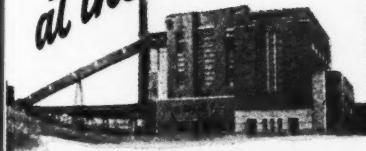
### PREPRINTS FROM PUBLIC UTILITIES REPORTS

*Various regulatory rulings by courts and commissions reported in full text, pages 65-128, from 39 PUR(NS)*



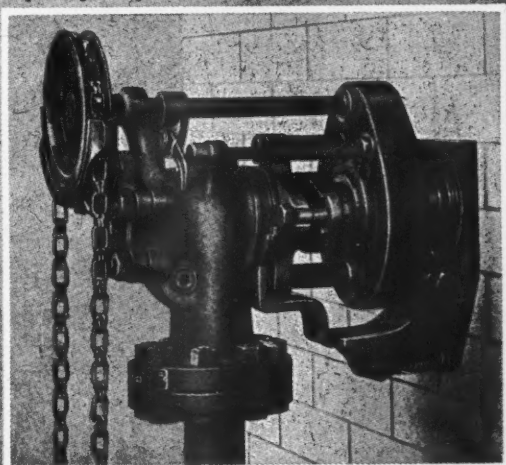
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## SOOT BLOWERS



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"You can't stop a panzer division with a row of electric refrigerators."

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*Vice president, Pacific Gas and  
Electric Company,*

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*Defense Coördinator of Health  
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*Chairman, Shipbuilding Stabiliza-  
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Office of Production Management.*

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*Chairman, Securities and Ex-  
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"... the sale by a holding company of its holdings in operating companies is by no means a losing proposition for the holding company and its security holders."

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*Director, National Popular  
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"I can think of no New Deal achievement so universally acclaimed by the American people as the founding of the Rural Electrification Administration in 1935-36 ..."

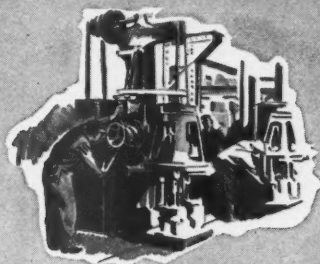
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*Excerpt from report of Industrial Securities Committee, Investment Bankers Association.*

"Unfortunately, we have traveled so far toward governmental control of private initiative that no easy alternative appears possible at this time of national emergency."

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*President, American Federation of Labor.*

"The American Federation of Labor regards private ownership, private enterprise, and private initiative as fixtures within the democratic structure of our government."

C. W. KELLOGG  
*President, Edison Electric Institute.*

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*Chairman, Reconstruction Finance Corporation.*

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*U. S. Secretary of Commerce.*

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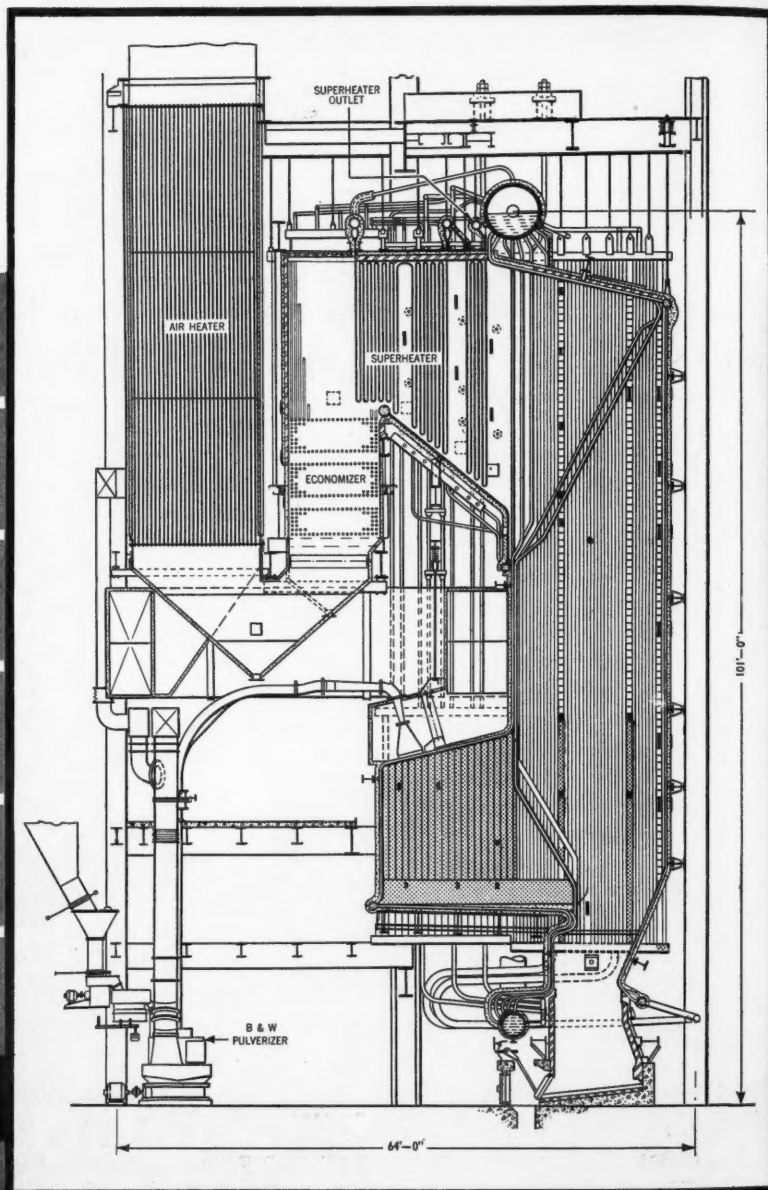
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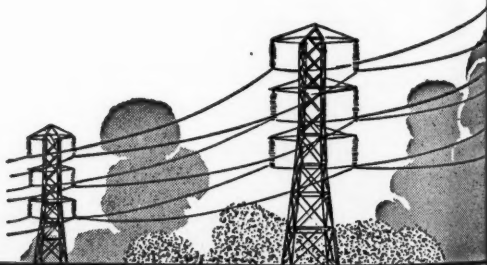
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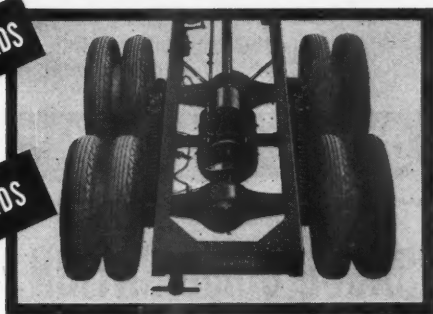
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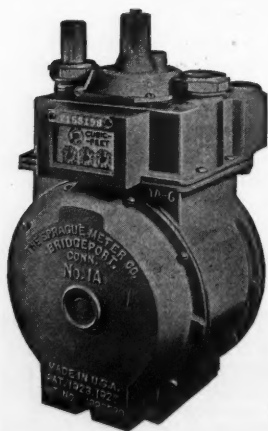
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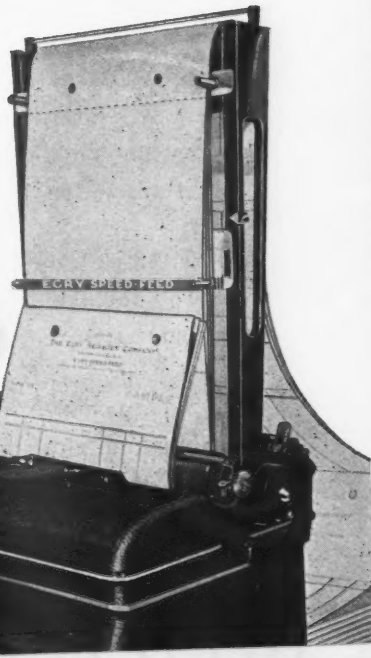




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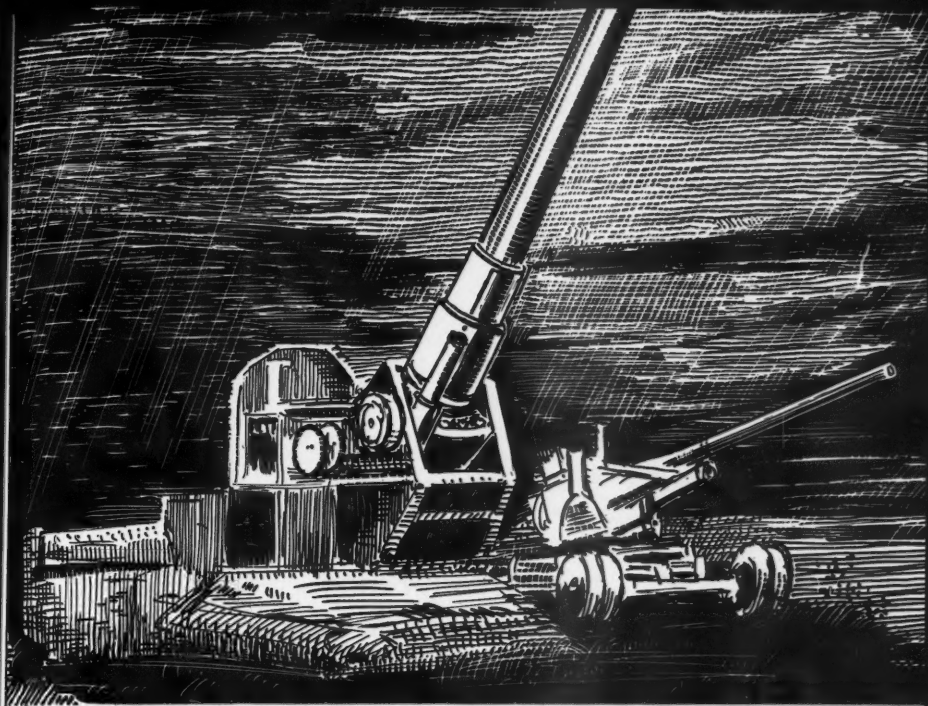
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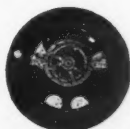
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# INTERNATIONAL HARVESTER

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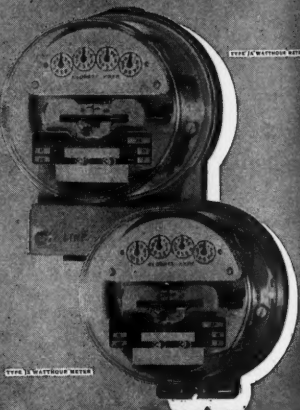

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now in service are old and uncompensated. Considerable revenue losses often result from metering modern appliance loads with these uncompensated meters. With modern Sangamo Type J Meters, however, the loads imposed by today's diversified electric appliances are metered accurately—resulting in full revenue for all load gains.



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(SHOP HYDROSTATIC TEST—230 LB. PER SQ. IN.)

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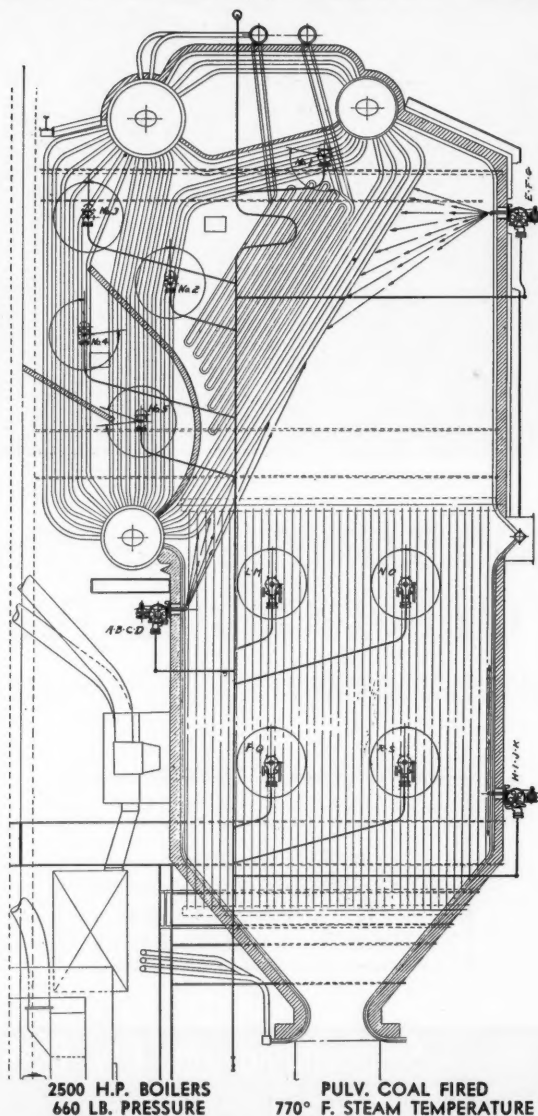
(Hydraulic Turbine Division)

Newport News, Virginia

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APPLIED TO

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## WITH PITTSBURGH IMO METERS

THE water meters in any 100% metered distribution system are the sole basis upon which the income for the water plant is determined. The degree of accuracy with which these meters measure has an important bearing on revenue return. It has been determined that by using Pittsburgh IMO Meters, a revenue increase of from 2% to 10% can be anticipated, thereby raising net income by as much as 25% to 200%. This can be accomplished without any additional cost other than the slight difference in price between the IMO and other types of meters.

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In addition to additional revenue another feature of the Pittsburgh IMO that "is worth its weight in gold" is SILENT OPERATION. The IMO Meter, due to its basic construction, will never become noisy. It operates quietly, both when new and after millions of gallons have been measured. The absence of nutating or oscillating parts results in a smoothness and quietness of operation that sets a new standard for domestic meters.

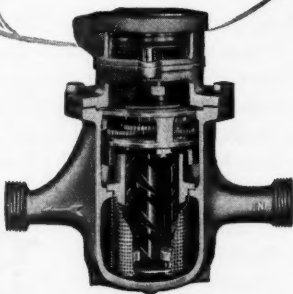
A new Bulletin, W-531, describing a new chapter in water meter history and the Pittsburgh IMO Meter will be sent upon request.

### PITTSBURGH EQUITABLE METER COMPANY

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- ★ I've got a new 2-Speed Job
- ★ It's a honey to handle
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## *Yours for Easy Shifting*

So easy, in fact, that in most instances, after a little practice, you can shift without declutching. And it's all because the new Timken "EASY-SHIFT" makes possible an instantaneous engagement of the shift collar with the desired pinion at synchronized speeds in Timken 2-Speed Axles. "EASY-SHIFT" results in the elimination of speed loss in shifting on upgrades, and minimizes shock load from sudden clutch engagement. It is in itself a distinct contribution to driving ease. For the first time, too, you can utilize remote control power shifting. But whether you prefer manual, vacuum, compressed air, or mechanical control, be sure your new 2-speed-drive truck has a Timken Axle with the new "EASY-SHIFT."

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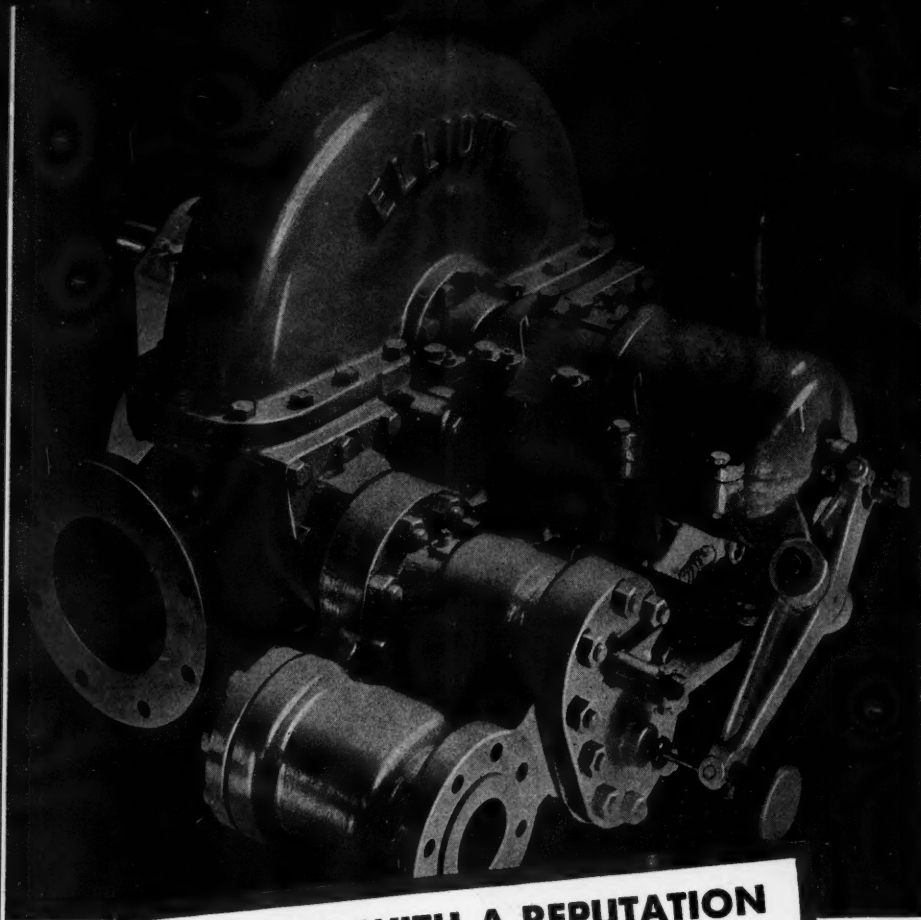
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STEEL IS NOW IN  
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# **ELLIOTT**

**TURBINES FOR DEPENDABLE DRIVES**

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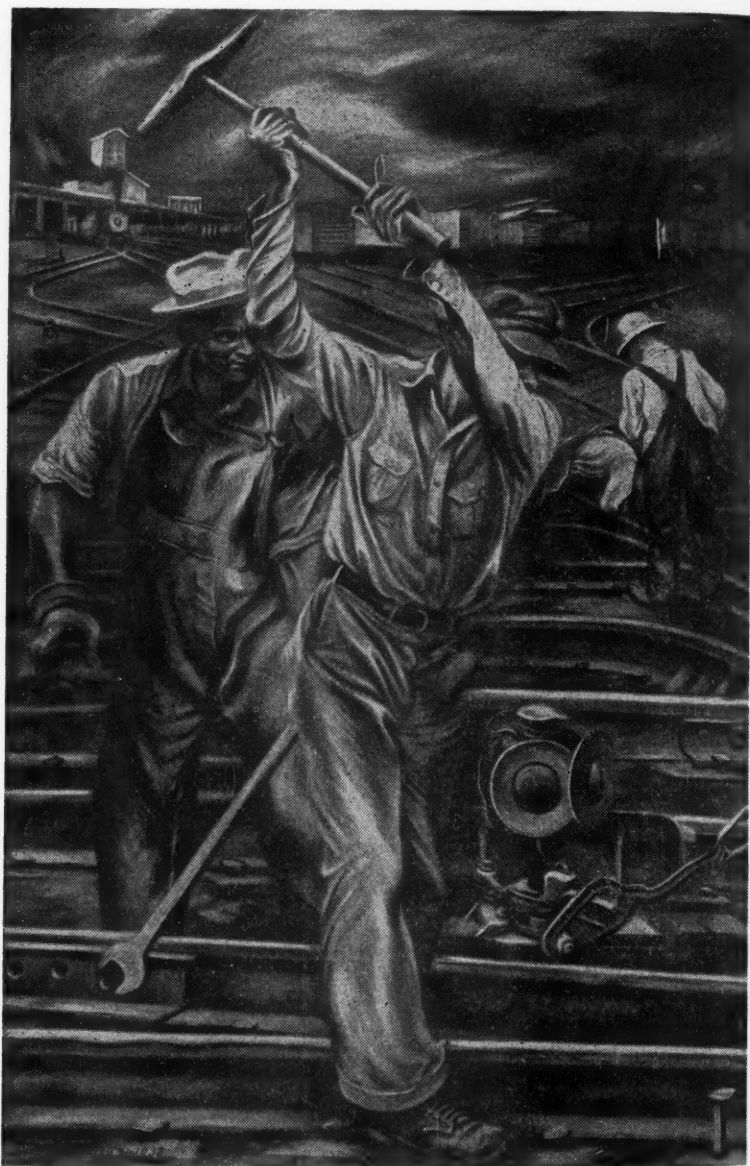
# Utilities Almanack



AUGUST



14	T <sup>a</sup>	¶ State Municipal League of Utah opens convention, Provo, Utah, 1941. 
15	F	¶ Pennsylvania Electric Association will hold annual convention, Bedford Springs, Pa., Sept. 3-5, 1941.
16	S <sup>a</sup>	¶ Municipal Electric Utilities Association of New York State will hold session, Jamestown, N. Y., Sept. 3-5, 1941.
17	S	¶ Maryland Utilities Association will hold annual convention, Ocean City, Md., Sept. 5, 6, 1941.
18	M	¶ League of Iowa Municipalities starts meeting, Council Bluffs, Iowa, 1941. ¶ Appalachian Gas Measurement Short Course begins, Morgantown, W. V., 1941.
19	T <sup>a</sup>	¶ Michigan Municipal League will hold meeting, Traverse City, Mich., Sept. 10-12, 1941.
20	W	¶ American Water Works Association, New York Section, will hold fall meeting, Glens Falls, N. Y., Sept. 11, 12, 1941.
21	T <sup>a</sup>	¶ Wisconsin Utilities Association, Accounting Section, will convene, Green Lake, Wis., Sept. 12, 13, 1941.
22	F	¶ Association of American Railroads, Telephone Section, will hold meeting, Cincinnati, Ohio, Sept. 23-25, 1941. 
23	S <sup>a</sup>	¶ Association of Iron and Steel Engineers will hold convention, Cleveland, Ohio, Sept. 23-26, 1941.
24	S	¶ American Transit Association will hold convention, Atlantic City, N. J., Sept. 27-Oct. 2, 1941.
25	M	¶ International Association of Electrical Inspectors, Southwestern Section, opens meeting, San Jose, Cal., 1941.
26	T <sup>a</sup>	¶ National Association of Railroad and Utilities Commissioners starts annual convention, St. Paul, Minn., 1941.
27	W	¶ American Institute of Electrical Engineers opens Pacific coast convention, Yellowstone National Park, 1941.



*Courtesy of the A. C. A. Gallery*

## Railroad Workers

*By Joe Jones*

*From Elsie Hafner, N. Y.*

# Public Utilities

FORTNIGHTLY

VOL. XXVIII; No. 4



AUGUST 14, 1941

## The Arkansas Valley Authority

### Part I. The Historical Background

*In this instalment the author shows how rivers which were formerly almost the only arteries for travel, trade, and commerce afterwards by exploitation of natural resources were turned into bearers of misery and distress. The resulting problem and struggle for solution.*

By H. W. BLALOCK

FORMER MEMBER, ARKANSAS DEPARTMENT OF PUBLIC UTILITIES

ALL of us have heard of the Arkies, the Oakies, and have read the book and have seen the picture, "The Grapes of Wrath," but most of us have dismissed it as just "one of those things." There is a basic cause for this migration of these thousands of people. They are not necessarily the "scum of the earth," unworthy of our notice. They are the victims of circumstances which can be completely cured by proper regional planning and regional development. The tragedy of it is that thousands more must "hit the road" each year to seek, not a fortune, but a living. And this will con-

tinue until the proper remedial measures are brought into play to correct the basic causes.

A bill has been introduced in the Congress by Congressman Ellis and Senators Miller and Caraway, all of Arkansas, which if passed will create a Federal corporation known as the Arkansas Valley Authority. It is patterned after the Tennessee Valley Authority but improvements based on TVA experience have been incorporated.

The bill is purported to have Federal administration support. The objectives of the bill are to give a "large

## PUBLIC UTILITIES FORTNIGHTLY

dose" of medicine to cure the economic malady of the region and to restore the sick patient to vigorous health once more.

The AVA, if created, will take on a man-sized job. It includes the entire drainage basins of the Arkansas, St. Francis, Red, and White rivers. It will include all of the states of Arkansas, Oklahoma, and parts of Louisiana, Missouri, Texas, New Mexico, Colorado, and Kansas. It will cover a region averaging 400 miles in width, extending from the Mississippi river more than 1,000 miles west to the Rocky mountains, covering approximately 300,000 square miles, with a population of eight million people. It will be seven times as large in area as the TVA.

THE purpose of the AVA is to provide a program of total water control in the region comprising the watersheds of these four great rivers and their tributaries. This water-control program would include irrigation, flood control, navigation, drainage, production and distribution of power, reforestation, wild life propagation, and soil erosion control, together with related scientific research and planning for the development of the region. It proposes to rediscover the rivers, to harness them, and to put them to work for the people.

Now, how will the AVA affect the "Grapes of Wrath" people and those who are still fighting desperately to maintain the economic stability of the region?

That's a long story, but first let us look back and see if we can pick up the basic causes for the economic conditions in the region.

### *The Story behind the "Grapes of Wrath" People*

SETTLEMENT of the region was largely from east to west. The settlers pushed on from the eastern states through Arkansas into Oklahoma, Colorado, and Texas. From Missouri they settled Kansas, Colorado, and Oklahoma. The settlers traveled both overland and up the rivers to heads of navigation.

In these early days steamboats traveled up the Arkansas river as far as Port Gibson in Oklahoma, up the Red as far as the mouth of the Kiamichi river in Oklahoma, up the White to Batesville, Arkansas, and up the Ouachita to Arkadelphia, Arkansas. There is practically no traffic on these streams today except for the Ouachita as far as Camden, Arkansas.

THESE rivers were the arteries for travel, commerce, and trade—almost the only open road through the wilderness for the settlers and the open doorway for young, thriving settlements. It was from the river settlements that the interior regions received their settlers, supplies, and markets. The ancestors of the "Grapes of Wrath" people traversed these rivers. Blessed was the region in those days that possessed many rivers. These blessings have since turned into a curse, except in the irrigation region. All too frequently these rivers bring destruction and misery through periodic floods. These floods destroy life, property, and crops, bring in their wake sickness, disease, and pests, and make unstable the economy of all the people. No longer are the rivers bearers of burdens of commerce, but have been turned into bearers of misery and distress. They are



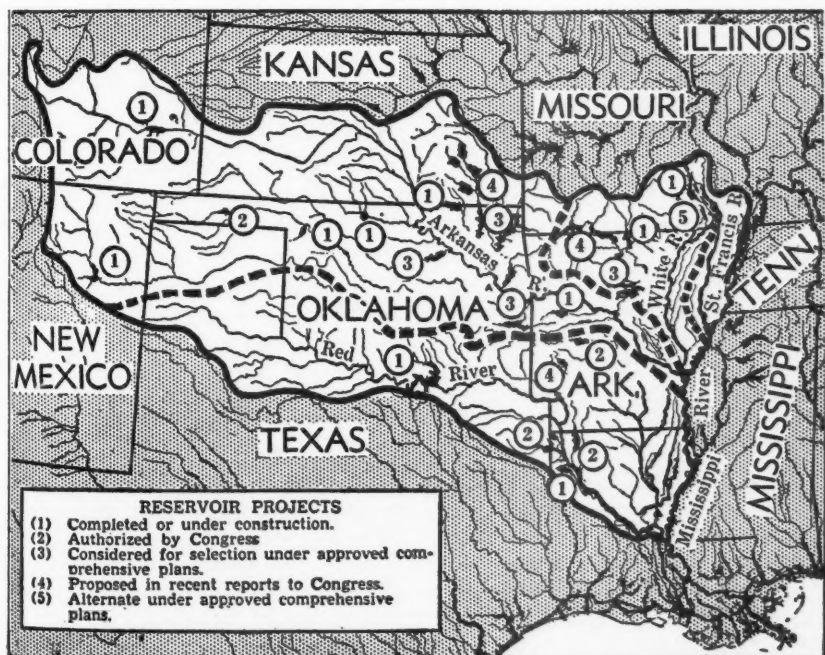
## THE ARKANSAS VALLEY AUTHORITY

now the "untamed horses of the Wild West" waiting for man to harness and put them to work.

This great change in the usefulness of our streams has occurred during the past century. What is the explanation of this change in so short a period? We lost interest in our rivers when other bearers of commerce—the railroads and later highways—supplanted our need for them. We were so engaged in settlement and development of the region that we forgot (or never knew) that the methods of land utilization might change these rivers into ugly monsters to upset our economy. The laws of nature were ignored. It was only in the dry regions of the western part of the country where water is so

essential that interest was maintained in the rivers.

A GREAT lesson can be learned from Mother Nature. In the many, many years prior to the coming of the white man, nature had provided an excellent cover of forest, grass, and other plant life for all of the watersheds of the AVA region, where climate permitted. In the prairie regions nature provided coarse, deep-rooted grasses which held the soil in place. The early settlers had great difficulty plowing up this grass. It required a large plow pulled by several yoke of oxen to break this prairie turf. The hills, slopes, and valleys outside of the prairie region were well covered with a heavy stand



## PUBLIC UTILITIES FORTNIGHTLY

of timber, grass, and other plant life. This great cover of the watersheds held the soil in place, retarded the run-off of water, and permitted the water to be absorbed into the ground. Consequently, a minimum of soil was carried into the streams to fill up the channel with sand and mud bars which obstruct the stream. Furthermore, the infiltration of water into the soil reduced the run-off after rains and increased the flow of springs during the summer period. This tended to reduce the maximum flow and increase the minimum flow, both beneficial for the stabilization of the stream channel. Thus, during the summer period there were several feet more of water in the stream which tended to keep the channel open. This is why the steamboats were able to travel so far up these streams. Navigation was made easier by the fact that there was little silt in the stream to clog it up.

Of course, nature did not do a perfect job of preventing soil erosion. It was impossible for nature to prevent the mountains from wearing down. There were floods before the white man came but they were less frequent and less intense than now.

**I**T was impossible to settle this A.V.A. country and retain all the handiwork of nature. Forests must be cleared away to make room for farms, cities, and roads. Additional timber must be cut to provide lumber for the great construction program which must follow settlement. Food for livestock required grazing and the cultivation of grain and roughage crops. Production for domestic and foreign needs required the putting under the plow of many millions of acres.

AUG. 14, 1941

At present there are approximately 587,000 farms in the watersheds of the Arkansas, Red, St. Francis, and White rivers. These farms comprise 100,000,000 acres of land, of which 40,000,000 are cultivated. Practically one-half of the area is in farms and one-fifth under cultivation. A large part of the uncultivated part is subject to grazing. The half of the region which lies outside of the farms is made up of rough hill country, arid plains, cut-over forest lands, swamps, abandoned farms, and prairies.

The principle of exploitation prevailed in the settlement of this region as elsewhere. Life is necessarily hard for the settlers of any country and the easiest way to make a living must be followed. Little care was given land that was abundant and cheap. When the soil had been exhausted by soil erosion, the settler abandoned it, moved over to new land, and repeated the same process. Millions of acres of prairie land were plowed up or overgrazed and subjected to erosion. The lumber companies moved into the wooded regions, resorted to the cheapest methods of cutting the forests, which, incidentally, were the most destructive. This lumbering process left behind a desolate waste of denuded land. The process of undoing the handiwork of nature was accelerated as man continued the settlement of the country.

**I**T is not contended here that the country should not have been settled because of the waste which came of it. Neither is it contended that the region is oversettled and a part of the population, including the "Grapes of Wrath" people, must move out. Quite the contrary is true, if man will put to

## THE ARKANSAS VALLEY AUTHORITY

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### Purpose of the AVA

**“T**HE purpose of the AVA [Arkansas Valley Authority] is to provide a program of total water control in the region comprising the watersheds of . . . four great rivers and their tributaries. This water-control program would include irrigation, flood control, navigation, drainage, production and distribution of power, reforestation, wild life propagation, and soil erosion control, together with related scientific research and planning for the development of the region.”

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work the ingenuity and skill that he has. He can control and prevent the ravages which have come to the region and thereby can make possible maintenance of a much greater population at an ever higher standard of living.

The result of this exploitation is that man has destroyed a great part of the protective covering which nature has provided. Water which formerly fell on the prairie grass, the forests and wooded slopes, the grassy meadows, to be held in check by these and absorbed into the ground, or held in check by roots, leaves, and other natural cover, is now allowed to run pell-mell down the slopes into the creeks and rivers and on down to the main rivers and to the gulf. These waters take with them the soil and débris which lie in their path. The erosion of the soil from the fields and unprotected lands impoverishes them and makes it even more difficult for nature to replace vegetable cover.

Productivity of the eroded land diminishes and the farmers find it progressively harder to make a living. Usually after a few years the farmer has to abandon the land, bring into cultivation other new land near by, or become one of the “Grapes of Wrath” people. A vicious circle ensues which intensifies the waste of soil.

**T**HE eroding soil in the drainage basin of the streams covers up land on lower slopes and much of it finds its way into the stream beds and is left there in deposits as the rushing waters lose their momentum. This soil, together with débris, fills up the streams and retards the flow of water. This is especially true after the stream leaves the hill country and winds through the level bottom lands. This filling up of the stream beds impedes transportation and causes the stream to overflow its banks in flood stage.

## PUBLIC UTILITIES FORTNIGHTLY

It is estimated by the Soil Conservation Service that the Arkansas river deposits each year 26,390,000 tons of silt into the Mississippi. To move this soil by land would require 527 freight trains of 100 cars each with each car loaded with 50 tons of soil. Figures on the Red are not available. It is not unreasonable to believe that it carries half as much as the Arkansas, since its drainage basin is about 55 per cent as large as the Arkansas. The White river carries less silt since it flows down out of the "worn-down" Ozarks. The Soil Conservation Service estimates its annual silt burden emptied into the Mississippi to be 2,151,000 tons. The estimate for the St. Francis is 700,000 tons annually. The sum total of silt carried by the four streams is approximately 42,000,000 tons, which is enough top soil to cover about 40,000 acres of farm land 6 inches deep annually. Great quantities of silt, sand, and gravel are deposited in the stream and in the flood plains before these streams reach the Mississippi. Many additional thousands of acres are ruined each year by deposits of sand, washing, etc. It is estimated by the Soil Conservation Service that 23,000,000 acres in the region are very severely eroded; that 29,000,000 other acres are severely eroded; and that 65,000,000 acres are moderately eroded. In other words, over half of the land is already eroded to some extent and one-fourth of the land is practically ruined for cultivation. The direct flood damages alone in the region amount to a yearly average of \$9,337,000. The indirect flood damages must be nearly as great. This annual bleeding of the soil is the real cause of the impoverishment of the farmers in the region and the circum-

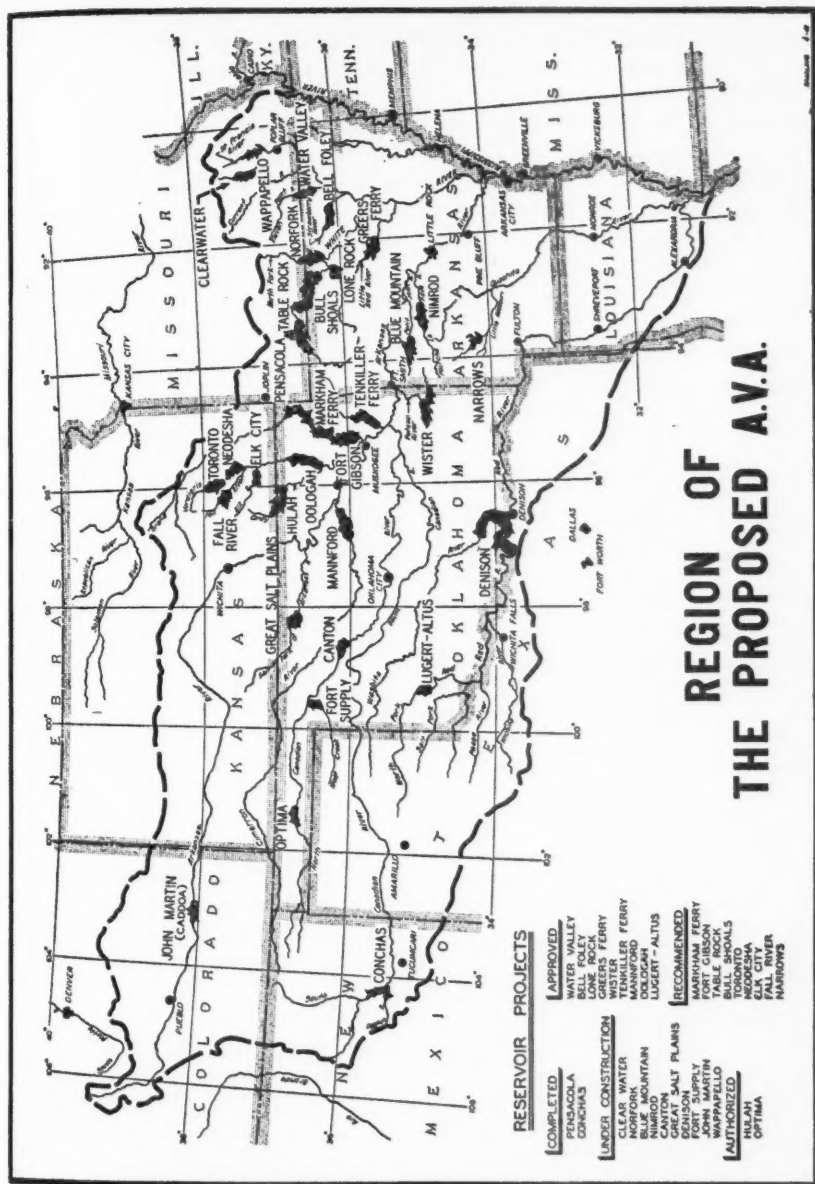
stance which brings about the constant migration of the "Grapes of Wrath" people.

### *Two Centuries of Struggle*

WE have been struggling for two centuries to get control of the waters of our streams. There has been much trial and error method used and many people have devoted their lives to the solution of this problem. The greater part of the work during this long period has been devoted to the control rather than the prevention of floods. It was not until almost the immediate present that we came into a comprehensive knowledge of how to prevent floods. Our tardiness in securing this important information is probably due to the fact that our interest in the rivers of our country was largely devoted to the promotion of commerce by opening up and controlling navigable channels in our streams. The interest of the Federal government in this work was brought about by the commerce clause of the Constitution which empowered Congress to regulate commerce with foreign nations and among the several states. Navigation on the rivers was particularly pertinent to commerce during the early period when river traffic was important.

The progress and development of river control can best be illustrated by the work done on the Mississippi river. The first levees were constructed in front of New Orleans in 1727. In this early period it was the duty of the farmers along the river to provide levees for protection. The introduction of steamboats on the Mississippi river between 1811 and 1817 was largely instrumental in creating a demand for river improvement. Federal operations

# THE ARKANSAS VALLEY AUTHORITY



## THE REGION OF THE PROPOSED A.V.A.



## PUBLIC UTILITY FORTNIGHTLY

on the Mississippi river date from 1820. By 1845 the demand for navigation improvements had crystallized into a definite problem demanding an engineering solution. Periodically, major floods on the Mississippi created anew demands on the Federal government for flood control. After each of these floods comprehensive studies were made and plans submitted for improving navigation and controlling floods on the river. All of these reports strongly advocated the use of a levee system for controlling floods and improving navigation. All of the reports dealt with the main body of the stream and little or no attention was paid to the tributaries, because they were considered local in nature. That is, flood-control work carried on by the Federal government should stop where the major channels for navigation ended. No attention was given to watershed treatment because that, too, was considered a local problem.

**J**OHAN C. Calhoun in 1845 advanced the view that both flood-control protection and navigation were national rather than local problems. It is also interesting that Charles Ellet, an engineer, in 1850 recommended, among other things, the construction of a system of head water reservoirs. Neither the ideas of Mr. Calhoun nor Mr. Ellet bore fruit until the almost immediate present.<sup>1</sup> During this early period Congress required local participation in the cost of flood-control works. All work on other than princi-

pal navigable channels was carried on by local people at their own expense.

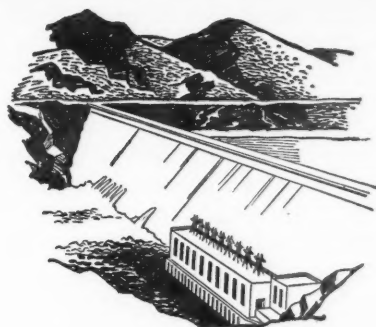
Operating under the local benefit principle, the people of large sections of the lowland area organized themselves into special drainage and levee districts and assessed very heavy taxes against their property. Most of these districts have been in financial difficulties and many of them have had to refund their bonded indebtedness. The farm lands in these areas are still carrying a very heavy tax load in an attempt to solve their flood problems. Periodically, floods come down and destroy most of the work that has been done, for which the people must pay in years to come. They have no control over their streams because the intensity of the flood is determined by the utilization of the land at the headwaters of the stream. Congress did not remove the requirement of local participation in cost until 1938.

**I**T was not until after the disastrous flood of 1927 that the nation was awakened to the fact that the control of flood waters on our streams was a national problem. As a result of this awakening Congress declared its policy on flood control in 1936 as follows:

It is hereby recognized that destructive floods upon the rivers of the United States, upsetting orderly processes and causing loss of life and property, including the erosion of lands and impairing and obstructing navigation, highways, railroads, and other channels of commerce between the states, constitute a menace to national welfare; that it is the sense of Congress that flood control on navigable waters or their tributaries is the proper activity of the Federal government in cooperation with states, and political subdivisions and localities thereof; that investigations and improvements of rivers and other water ways, including watersheds thereof, for flood-control purposes, are in the interest of the general welfare; that the Federal government should im-

<sup>1</sup> For a brief history of the lower Mississippi flood control see "The Improvement of the Lower Mississippi River for Flood Control and Navigation," by D. C. Elliott, Major, Corps of Engineers, Vol. 1, Chap. 1, page 1, 1932.





### Deposits of Silt in the Mississippi

**"I**t is estimated by the Soil Conservation Service that the Arkansas river deposits each year 26,390,000 tons of silt into the Mississippi. To move this soil by land would require 527 freight trains of 100 cars each with each car loaded with 50 tons of soil. Figures on the Red are not available. It is not unreasonable to believe that it carries half as much as the Arkansas, since its drainage basin is about 55 per cent as large as the Arkansas."

prove or participate in the improvement of navigable waters or their tributaries, including watersheds thereof, for flood-control purposes if the benefits, to whomsoever they may accrue, are in excess of the estimated costs, and if the lives and essential security of the people are otherwise adversely affected. (Public No. 738, 74th Congress, § 1.)

The Congress also declared in its policy that investigations and improvements of rivers and other water ways for flood control and allied purposes shall be under the jurisdiction of the Corps of U. S. Engineers; that the investigations of watersheds and measures of run-off and water flow retardation and soil erosion prevention on watersheds shall be under the jurisdiction of the Department of Agriculture. Thus, after a long period, the nation has accepted its responsibility in this problem.

We have come to a realization that the problem does not end where navigation begins but that it includes the entire watershed of the stream and all its tributaries.

**A**SCIENCE has been developed during this period for watershed treatment which, when fully put into practice, will prevent floods. These scientific methods, though not new in themselves, have come into general practice and recognition in this country only very recently. They cover the whole field of soils and their conservation. Recent experiments have disclosed a striking relationship between erosion and floods. The scientific approach might be illustrated by one example. Studies carried on near Ithaca, New York, show that a single acre of

## PUBLIC UTILITIES FORTNIGHTLY

corn land lost approximately 127,000 more gallons of rain water during the year than a similar field planted in grass.<sup>2</sup> If that same rate prevailed on a million acres of land planted entirely in corn, the area would pour 134,000,000,000 gallons of water into the streams and rivers in a single season. The run-off from the same amount of meadow land would be only 7,000,000,000 gallons.

**T**HE science must be applied to the entire drainage basin of a river and must be supplemented by large engineering projects, such as dams and reservoirs on the principal streams and their tributaries.

The scientific approach must begin with the individual farms throughout the watersheds. Good farming methods must be used to hold the waters and the soil on the farms. Only the most fertile and level lands are devoted to crops. The remainder are given over to pasture and wood lots. On the cultivated areas the farmer must practice crop rotation, contour tillage and terracing, strip cropping, and other modern practices to hold the water on his land and check the erosion of the soil. Scientific treatments must also be applied to the land that is not in farms. These consist of reforestation, check dams, small ponds and reservoirs, the control of forest fires, and other proper land treatments. This is a big program because it must be worked out in cooperation with the farmers. In addition to this, large dams and reservoirs must be properly located to catch the excess water that must inevitably run

off from the drainage basin. When a program of this nature is completed, the stream is under almost perfect control. There will still be a need for levees and channel work on the main body of the streams in the lowlands. However, with this upstream control these requirements will be minimized because the stream channel will be stabilized by regulated stream flow.

**A**NOTHER recent development is of great importance to this problem. The United States Supreme Court recently recognized the scientific approach to stream control in its decision in *United States v. Appalachian Electric Power Co.*, known as the New River Case.<sup>3</sup> In this case the power company refused to accept a standard license for the operation of a hydroelectric plant on the New river near Radford, Virginia, on the ground that the river was not navigable in fact nor in law.<sup>4</sup>

The court in this case stated that the Federal power over commerce must develop with the needs of commerce and is as broad as these needs; that its power is not limited to navigation but extends to flood protection, watershed development, and water power; that navigable waters are subject to national planning and control; that the flow of a navigable stream is in no sense private property and exclusion of riparian owners from its benefits without compensation is entirely within the government's discretion.

<sup>2</sup> (1940) 311 US 377, 36 PUR(NS) 129.

<sup>4</sup> For an excellent discussion of this case see: "Water-power Development and the New River Case," by John W. Scott, Commissioner, Federal Power Commission, *PUBLIC UTILITIES FORTNIGHTLY*, Vol. XXVII, No. 3, p. 131, Jan. 30, 1941.

<sup>3</sup> "Saving Our Soil," Public Affairs Pamphlets No. 14, p. 9. Prefaced by Maxwell S. Stewart.

## THE ARKANSAS VALLEY AUTHORITY

tion; that exercise of constitutional authority results in no interference with state sovereignty; and that the Federal government might acquire hydroelectric plants already built.

Commissioner John W. Scott of the Federal Power Commission recently stated:

Congress has theretofore recognized, and now the Supreme Court places its imprimatur upon the fundamental concept that the water resources of America—the totality of things inherent in and related to proper watershed development, long illusory—belong to, and may be realized and possessed by, the people of America.<sup>5</sup>

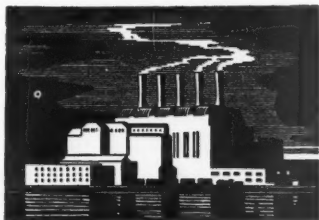
Thus, after a long history of court

decisions on the question of navigability of streams, the Supreme Court has gone all the way in recognizing that the Federal government has the right to apply known basic science to the entire watersheds of the streams to carry out the commerce clause.

We have, then, come through two hundred years of struggle toward finding a solution for this problem. The methods have been discovered and proven and the job that lies ahead is one of implementing this knowledge. The AVA is an agency proposed to carry out such a comprehensive program.

<sup>5</sup> *Ibid.*, p. 138.

*Part II of this article will critically analyze the Ellis-Miller-Caraway and the Johnson AVA proposals; the river control work under way; the present economic status and resources of the region.*

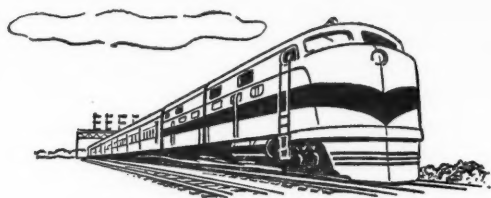


### More Power in Malaya

**W**AR activity has caused a remarkable increase in the output of electricity in the Malay states, especially in the region of the tin mines, where output has more than doubled since the outbreak of the war, due to increasing electrification of the tin mines as well as general expansion.

If the existing long-term rate of growth is sustained, it is estimated that by 1950 an over-all output of 600 to 1,000 million units will be necessary. The pre-war expansion program was in danger of being retarded by the difficulty and expense of obtaining steel, until it was discovered that a local product could be used with great convenience.

Although Malaya does not offer abundant sites for hydroelectric storage plants, the development of high head plants without storage in conjunction with steam stations is an attractive proposition because of reduced capital expenditure and low running costs.



## Must Railroads Lose 84 Cents On Each Passenger?

Serious problem presented by the steady  
decline in passenger revenues.

The author raises the question of what the companies can do about it and discusses possible methods of dealing with the situation including curtailment and improvement of the service and complete abandonment.

By OWEN ELY

THE financial ills which have beset the transportation industry in the past decade—with nearly one-third of our railroad mileage in receivership—seem traceable largely to the heavy losses incurred in maintaining an elaborate passenger service. In earlier decades of railroading, before the automobile, the bus, and the airplane became competitors, the passenger business was highly profitable. It was probably more profitable than freight business in the early days of rebating and cutthroat competition, but with freight rates and service under the careful regulation of the Interstate Commerce Commission, the competitive struggle veered into the passenger service. Trunk-line roads vied with each other in constructing monumental terminal properties costing hundreds of millions, one of the last being the Cleveland terminal built to glorify the ill-fated Van Sweringen rail empire. Other millions were squandered in

luxurious passenger equipment and the advertising of luxury trains designed to lure passengers from competing roads — heedless of the growing inroads of the bus and auto into the bread-and-butter coach service. Doubtless many a railroad now wishes the money had been used instead to reduce funded debt.

Only 4 railroads, out of 138 Class I railroads, were able in 1938 to cover expenses, taxes, and operating rents allocated to passenger service—the New York Connecting Railroad, Montour Railroad, Green Bay & Western, and Louisiana, Arkansas & Texas. For 2 of these roads the passenger business was of nominal proportions (about 200); the New York Connecting Railroad is merely a service road for other lines entering New York; Green Bay & Western passenger revenues amounted to only about \$6,000. None of these roads is, therefore, a typical railroad, and hence it seems fair to say

# Passenger Department Operating Ratios

	1939	1937	1935	1933	1929		1939	1937	1935	1933	1929
Alton R. R. ....	102.7	101.1	117.7	90.5	79.4	Maine Central .....	135.7	132.4	136.7	131.1	90.5
Ann Arbor .....	175.7	171.5	214.3	227.8	147.1	Minneapolis & St. Louis .....	182.9	171.7	204.4	205.8	137.9
Atch, Top, & S. Fe .....	127.7	138.1	144.6	139.8	82.0	Mpls., St. Paul & S. Marie .....	172.4	163.2	175.1	170.7	106.3
Atl., Birmingham & Coast .....	142.2	172.0	199.0	166.2	157.6	Missouri-Kansas-Texas Lines .....	148.0	140.1	165.5	165.2	99.2
Atlantic Coast Line .....	121.5	104.6	123.3	128.7	97.1	Missouri Pacific .....	151.27	148.6	174.1	164.3	108.0
Baltimore & Ohio .....	157.1	158.5	160.1	146.2	114.2	Mobile & Ohio .....	187.0	164.2	184.4	172.7	116.6
Bangor & Aroostook .....	199.8	193.3	197.0	187.7	102.7	Nash., Chatt. & St. Louis .....	128.4	124.8	135.6	143.1	97.2
Boston & Maine .....	113.5	107.1	116.9	109.9	91.2	New Or., Tex. & Mex. ....	236.4	222.3	272.7	277.9	144.8
Central of Georgia .....	152.0	139.4	144.6	149.6	108.7	New York Central .....	97.9	95.1	99.6	85.3	69.3
Central R. R. of New Jersey .....	153.8	142.3	148.6	141.9	110.2	N. Y. Chic. & St. Louis .....	190.0	171.5	195.6	155.6	139.0
Chesapeake & Ohio .....	191.7	183.1	214.2	226.4	124.6	N. Y., New Haven & Hart. ....	82.4	82.3	86.8	84.0	66.5
Chicago, Burlington & Quincy .....	127.5	123.0	134.1	126.5	98.2	N. Y., Ontario & Western .....	99.2	80.2	95.0	81.9	67.1
Chicago & Eastern Illinois .....	112.5	118.0	144.6	119.5	83.8	N. Y., Susquehanna & West. ....	185.4	167.1	237.4	224.8	163.8
Chicago, Great Western .....	176.5	175.3	190.4	177.2	102.6	Norfolk Southern .....	187.9	189.2	198.7	255.5	179.3
Chic., Indianapolis & Louisv. ....	146.0	128.9	122.1	103.5	82.3	Norfolk & Western .....	179.9	167.2	202.2	214.9	116.5
Chic., Milw., St. Paul & Pac. ....	145.0	137.4	166.6	151.7	112.6	Northern Pacific .....	171.7	164.3	189.1	196.3	122.2
Chicago & North Western .....	134.3	144.5	147.7	130.6	93.6	Pennsylvania .....	101.4	103.1	106.4	103.9	78.1
Chic., R. I. & Pac. (Syst.) .....	142.1	145.3	157.4	148.3	97.8	Pere Marquette .....	158.6	146.5	160.2	176.8	100.2
Chic., St. P., Mpls. & Omaha .....	175.3	162.2	165.8	147.4	97.8	Pittsburgh & Lake Erie .....	311.8	286.2	308.0	305.6	142.8
Clinchfield R. R. ....	222.5	197.9	196.2	267.7	123.5	Pittsburgh & West Virginia .....	178.0	81.6	...	...	204.5
Colorado & Southern (Syst.) .....	139.3	147.5	163.9	161.7	121.9	Reading .....	173.9	162.7	177.6	170.8	149.1
Delaware & Hudson .....	134.5	155.0	192.0	178.7	109.1	Rutland .....	119.2	121.4	132.7	132.7	84.8
Delaware, Lack. & Western .....	106.5	101.3	112.8	103.7	81.5	St. Louis-San Francisco .....	161.7	155.3	181.8	171.5	96.3
Denver & Rio Grande West .....	171.8	184.4	157.4	139.4	90.2	St. Louis Southwestern .....	306.8	249.0	258.1	284.1	164.0
Denver & Salt Lake .....	244.9	209.0	170.7	129.8	76.0	Seaboard Air Line .....	118.6	124.5	156.2	171.7	108.2
Detroit & Mackinac .....	198.2	212.7	198.5	218.9	141.3	Southern Pacific (Syst.) .....	112.1	118.1	111.7	116.6	85.5
Duluth, So. Shore & Atlantic .....	199.0	149.7	194.7	209.1	118.4	Southern Railway .....	116.0	109.0	129.3	132.3	86.0
Erie R. R. ....	144.5	132.9	142.3	128.4	106.1	Texas & Pacific .....	130.5	124.9	135.9	141.8	91.1
Florida East Coast .....	107.6	96.5	127.7	131.6	84.3	Union Pacific .....	131.7	127.5	125.5	122.4	93.6
Great Northern .....	146.0	135.2	146.6	147.3	104.5	Virginian Railway .....	335.0	315.6	421.3	361.4	198.7
Gulf, Mobile & Northern .....	176.5	155.9	212.0	225.0	170.0	Wabash .....	137.3	136.3	144.5	144.9	93.8
Illinois Central (Syst.) .....	123.6	116.4	147.0	114.2	99.5	Western Maryland .....	286.4	282.5	378.7	315.6	189.1
International Great Northern .....	180.0	165.5	177.2	192.7	117.1	Western Pacific .....	224.5	243.2	261.8	330.1	143.0
Kansas City Southern .....	191.7	173.8	202.9	189.7	107.8	Wheeling & Lake Erie .....	...	291.5	371.1	423.7	165.5
Lewistown Valley .....	153.2	152.3	148.0	136.5	91.7	Eastern District .....	108.0	107.4	112.5	104.0	81.7
Long Island .....	79.9	85.1	80.8	66.5	65.7	Southern District .....	130.2	122.4	146.1	146.4	99.9
Louisiana & Arkansas .....	120.2	195.8	162.0	164.4	192.8	Western District .....	136.6	137.3	148.2	141.9	98.8
Louisville & Nashville .....	142.0	134.3	143.1	161.8	102.5	All Districts .....	121.0	119.8	128.9	121.1	90.1

Data from Standard & Poor's.

## PUBLIC UTILITIES FORTNIGHTLY

that every road of importance in the United States is losing money on its passenger service. The extent to which they are losing is indicated by the accompanying table of passenger operating ratios for individual roads in 1939 and earlier years. Some roads are spending \$2-\$3 for each \$1 taken in—and this does not include fixed charges.

It seems doubtful whether the railroads fully realized, during the 1920's, that the passenger business was becoming unprofitable. Passenger revenues attained their peak in 1920, while freight revenues reached high-water mark in 1926—a figure not quite equaled in 1929. By 1933 passenger revenues had shrunk three-quarters from their peak level, while freight revenues had dropped less than one-half. In 1939 passenger business had recovered only about 9 per cent of the lost revenues; while the freight department had recouped nearly a third. Passenger and related revenues had dropped to 16 per cent of the total compared with 27 per cent in 1920.

Part of the passenger revenue decline was due to lowering of fares in an effort to counteract bus and auto competition. The latter were greatly favored by the rapid construction of highways, the cost and maintenance of

which were financed by general taxes. The average revenue per passenger mile remained fairly constant around the 2-cent level from 1890 to 1917, but inflation forced an advance to 3 cents in 1921; it held close to that level until about 1929, but by 1933 had dropped to 2 cents, and in 1937 to 1.796 cents, from which there has been only a slight rebound. Thus passenger-mile revenue in 1938 was 14 per cent lower than in 1890, despite the fact that wage rates had increased 233 per cent, that taxes were nearly twelve times the 1890 figure, and that commodity prices were about 42 per cent higher. Freight revenues per ton mile, on the other hand, were somewhat higher than in 1890.

THE railroads have made several efforts in recent years to increase the level of passenger fares, but the ICC has remained skeptical whether higher rates would produce more revenue, and certain roads, notably the Baltimore & Ohio, have opposed the program. The roads themselves nullified any temporary advantages from the higher rates by making concessions on round-trip fares, and the downward trend in average passenger-mile receipts, which began in 1922, has continued almost uninterruptedly.

The serious plight of the passenger



**Q** "ONLY 4 railroads, out of 138 Class I railroads, were able in 1938 to cover expenses, taxes, and operating rents allocated to passenger service—the New York Connecting Railroad, Montour Railroad, Green Bay & Western, and Louisiana, Arkansas & Texas. For 2 of these roads the passenger business was of nominal proportions (about 200); the New York Connecting Railroad is merely a service road for other lines entering New York; Green Bay & Western passenger revenues amounted to only about \$6,000."



## MUST RAILROADS LOSE 84 CENTS ON EACH PASSENGER?

business, and the deep inroads it is making into railroad net, have not been fully realized by the public—possibly not by the railroads themselves. While it is impossible, due to the nature of transportation, to apportion operating costs with much accuracy, the cost of each service can be approximated closely enough to obtain a picture of the havoc created by passenger service losses. But the figures have remained obscurely buried in the statistical reports issued (a year or so late) by the ICC, and rail stockholders have remained for the most part ignorant of the vital rôle of passenger losses.

During the first three decades in which the ICC compiled and published detailed statistics of railway operation, the commission refused to admit that cost accounting for the two major services was practicable. However, there was gradually developed a body of statistical formulae, devised by outside experts for the use of lawyers in the effort to overthrow the 2-cent state passenger fare laws, and in other rate cases; and the commission finally recognized the possible value of this method of appraising the financial results of the two major transportation divisions. Accordingly, the commission in recent years has published the "net railway operating income" obtained by all Class I roads from each of the two services, and the 1933 Statistics of Railways tabulated the operating ratios for each service for 1916-33.

THE commission does not attempt to apportion nonoperating income and fixed charges between the two services. In the chart on page 212, however, the division between services has been extended down to net income by

an approximate estimate based on the allocation of expenses. For 1916-33, it was also necessary to apportion taxes and operating rentals.

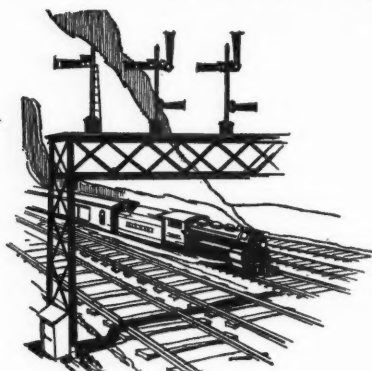
From the chart it is obvious that, if the railroads could discontinue their passenger business, their net income would be very substantially increased. They are apparently losing about \$1.60 on each passenger revenue dollar, or about 84 cents on each passenger carried (including commuters). The only redeeming feature for many roads is that the passenger business has declined to a small percentage of the total.

The old theory of transportation economy is that once the railway plant is built, every dollar of additional revenue obtained helps to defray fixed overhead and maintenance. As the writer has attempted to prove,<sup>1</sup> this is true in only a small degree and the exaggerated importance given to the joint cost principle by rail economists and executives has probably cost the industry billions of dollars. While the complete abandonment of the passenger service would, of course, not eliminate the loss shown in our chart unless the property account and capital structure were drastically revised, nevertheless a substantial part of the loss could be avoided, since about two-thirds of the operating expenses allocated to passenger service are "directly assignable"—in other words out-of-pocket expense.

SUCH abandonment would theoretically be possible in reorganization (about one-third of the railroads are now in process of reorganization) but neither the insurance companies (as the principal bondholders) nor the ICC

<sup>1</sup>"Railway Rates and Cost of Service," Houghton Mifflin & Company.

## Peak of Passenger and Freight Revenues



**"P**ASSENGER revenues attained their peak in 1920, while freight revenues reached high-water mark in 1926—a figure not quite equaled in 1929. By 1933 passenger revenues had shrunk three-quarters from their peak level, while freight revenues had dropped less than one-half. In 1939 passenger business had recovered only about 9 per cent of the lost revenues; while the freight department had recouped nearly a third. Passenger and related revenues had dropped to 16 per cent of the total. . . ."

have been of much aid to railroad managements in facing this problem. (Government operation of all the railroads as a unified system might help solve it.) An outstanding instance is the recent effort of New Haven to abandon the Old Colony mileage, which was obviously unprofitable. Holders of Old Colony securities were able to regain a share in the reorganization plan largely, it is believed, because the War Department wished the mileage retained to serve local defense industries. The ICC study apparently indicated that the company could be profitably operated for freight business, taking into account the defense industries; but instead of permitting abandonment of passenger service, it is to be placed on a 2-year "trial basis," thus forcing continuance of an uneconomic condition on the reorganized railroad.

Granted that the railroads are losing a tremendous amount of money on their passenger service, what can they do about it? Possible remedies are:

1. Abandonment of the least profitable mileage, particularly where this could be easily served by busses and trucks;
2. dropping of the passenger service as a whole;
3. curtailment of passenger service as much as possible;
4. installation of better facilities, such as air conditioning, streamlined trains, cheap diners, comfortable coach cars and reclining chairs, improvement of Pullman service, etc.; and
5. readjustment in fares to yield maximum net returns.

**T**AKING these in the order named, mileage abandonment is difficult because it must be approved by the authorities, and local pressure can be brought to bear on the latter; the general viewpoint has been that "in the public interest" the railroad as a utility must serve its patrons even at a heavy loss. It is possible that with a more energetic public relations and legal staff, many roads could curtail passenger service on local divisions by sub-

## MUST RAILROADS LOSE 84 CENTS ON EACH PASSENGER?

stituting bus services. While the cost of running one or two trains a day to service these divisions may not seem great, the necessary maintenance of way and structures adds considerably to the cost. Many divisions have been "motorized" by substituting small motorized units in place of passenger trains; but this does not eliminate the maintenance of way cost.

Elimination of passenger service over the whole railroad would be almost impossible for the larger companies, because of the public outcry which would be raised. Moreover, most of the larger roads use main-line mileage for both freight and passenger service, and the old theory of joint-cost contribution is too strongly ingrained to permit abandonment. Saving in fixed charges would be small since salvage on equipment, stations, etc., would be insufficient to retire many bonds. Federal income taxes would take some toll of any net savings. The principal question would, therefore, be whether savings in directly assignable expenses would offset the revenue loss. In many cases they probably would, but on the other hand the loss of good will and the potential cost of litigation would be deterring factors. Only twelve Class I railroads in 1938 reported no passenger revenue; and all of these, with two or three exceptions, were small local roads (the largest was the Elgin, Joliet & Eastern with about \$12,000,000 freight revenue). It would be interesting to study the reasons why these roads have no service, but that is beyond the scope of this article.

**C**URTAILMENT of passenger service might have been more drastic if

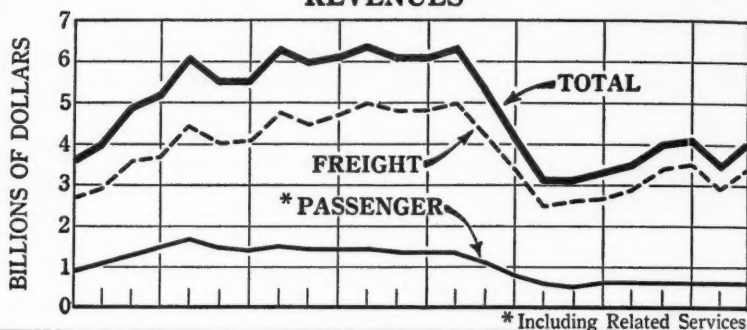
railroad management had pursued a realistic policy. Many rail executives have apparently remained hopeful that they could lure back some of the passengers already lost. While a few special trains between large cities have been canceled, there are still many instances where competitive "crack" trains—on which considerable advertising is spent—might well be reduced in number, as in the New York-Chicago service where the New York Central and Pennsylvania vie for prestige; and the Chicago-Twin City overnight run, where four or five roads run trains. Much could be accomplished along this line if the railroads were not so concerned with the intangible thing called prestige, which many of them seem to think is important in securing competitive freight.

The fourth method of recouping passenger losses, that of improving the service, is apparently the favorite method of the executives of the larger roads. An early step was air conditioning, and in the past eight years about 75 per cent of all Pullman cars and 18 per cent of all coaches have been air conditioned.

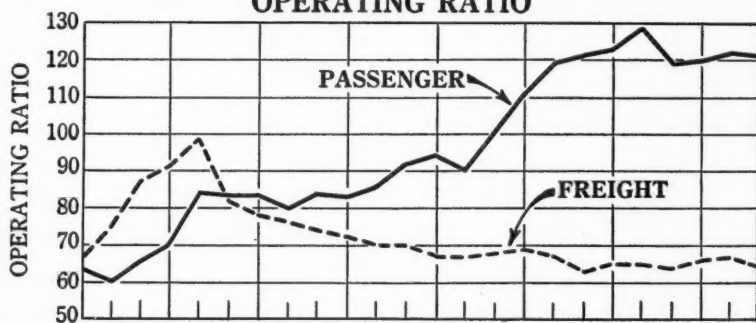
Many large railroads have tried to coax back passenger traffic in recent years by installing "zephyr" or other streamlined trains. No statistics are apparently being compiled by the ICC regarding the mileage operated by these trains, but judging from the amount of advertising by both the manufacturers and the railroads, a great deal of money must have been spent in installing them. The *Railway Age* in a special review last November reported that there were 98 streamlined, lightweight trains then in operation, with 26 more on order. Some 32 of these

# **PASSENGER VS. FREIGHT EARNINGS** **U.S. CLASS I RAILROADS**

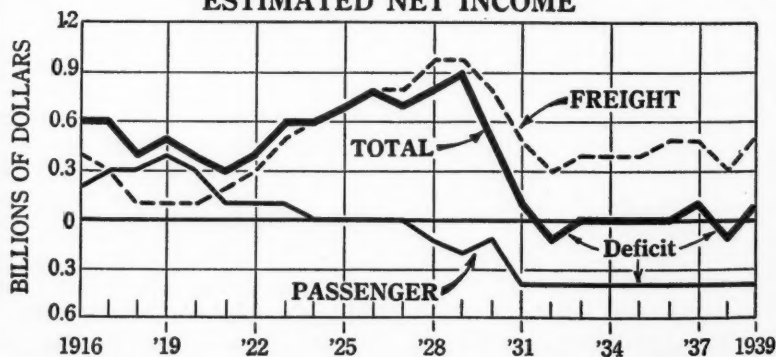
## **REVENUES**



## **OPERATING RATIO**



## **ESTIMATED NET INCOME**



## MUST RAILROADS LOSE 84 CENTS ON EACH PASSENGER?

### REVENUES AND EXPENSES OF STREAMLINED TRAINS (As Compiled by COVERDALE & COLPITTS FOR YEAR ENDED JUNE 30, 1939)

	No. of Trains	Revenues (Thous.)	Train Exp. (Thous.)	Ratio Expense to Revenues
Union Pacific .....	1	\$134	\$13	9%
Union Pacific, So. Pac. & North Western .....	1	389	130	33
" " .....	5	3,628	1,623	45
" " .....	2	1,656	947	57
Southern Pacific .....	2	212	62	29
" " .....	2	1,816	1,325	73
Burlington .....	8	3,959	2,575	65
St. Paul .....	2	1,310	986	75
North Western .....	2	715	338	47
Atchison .....	9	3,860	2,237	58
Rock Island .....	7	1,725	1,085	63
Illinois Central .....	1	279	120	43
Gulf M. & M. ....	2	227	69	30
Baltimore & Ohio .....	2	1,155	698	60
Seaboard Air Line .....	1	*281	*200	71
New Haven .....	1	105	31	29
Boston & Maine and Maine Central .....	1	229	135	59
Totals .....	49	\$21,680	\$12,574	58%
Average per train .....	..	445	257	58%

\* Part of year only.



had been installed in the previous twelve months; the balance during 1933-1939. However, this equipment was only about 2 per cent of all passenger train equipment, indicating the relatively small progress made thus far in the rebuilding of passenger equipment.

**S**TREAMLINED trains are largely powered with Diesel locomotives built by Electro-Motive Corporation (General Motors subsidiary). About 70 per cent of the cars have been built by Pullman-Standard, the balance largely by Budd Manufacturing. Electro-Motive Corporation in a recent advertisement stated that "all 120 EMC Diesel-powered passenger trains now in operation are making money—earning a very satisfactory profit on every dollar spent to

buy them and keep them on the job." Inquiry at the New York office of the company yielded little information to support the contention regarding earnings, but reference was made to a comprehensive study of streamlined trains prepared by Coverdale & Colpitts.

The accompanying table, giving earnings data for 49 trains in the twelve months ended June 30, 1939, was summarized from that study. Based on these figures, with an average ratio of *train* expense to revenues of only 58 per cent, the results appear very gratifying. But they do not necessarily mean, as indicated in the Electro-Motive advertisements, that these trains are actually making money. While Coverdale & Colpitts' study does not fully define "train expenses," it seems that they have used only the transportation

## PUBLIC UTILITIES FORTNIGHTLY

expense and maintenance of equipment expense assignable to the trains. Assuming this to be the case, it should be realized that such expense constitutes only about 74 per cent of all operating expense assignable to passenger service (based on figures for all Class I roads in 1939) and only about 56 per cent of the estimated total cost of passenger service (including rents and fixed charges). Unless these other costs can also be scaled down sharply, the trains are still operating "in the red." However, passenger transportation costs and equipment maintenance costs for all Class I railroads in 1939 were about 89 per cent of revenues, compared with 58 per cent for the streamlined trains, indicating a very substantial improvement by the latter over results in other branches in the passenger service.

**T**HERE seems little doubt that the new streamlined trains are much more popular than the old—but do they draw the increased traffic from the company's other trains, or recapture it from the bus and automobile business? Where the "zephyr" trains are made up of low-cost, reclining-chair coaches, with reasonably priced dining service, the results may really mean a net traffic gain for the railroad; when they are all Pullman the gain seems doubtful. The majority of the streamlined trains are probably in the Pullman or "luxury" class.

The Pennsylvania Railroad recently inaugurated the first high-speed streamlined coach services between New York, Chicago, and St. Louis; the Central now has a similar service.

These new trains permit students and other persons of moderate means

to avoid the additional train and Pullman fare, but impart a smart and glamorous touch to the coach service; they should become increasingly popular and profitable. The railroads are now beginning to do what the Pullman Company should have done long ago—provide clean, fast service at a price which the great American middle class can afford.

The Pullman Company, after resting on its laurels for many years, is now experimenting with new types of sleeping-car arrangements, but without striking success as yet in winning back traffic; the major problem is not to make the quarters more comfortable for those able to pay, but to substitute light-weight cars, sharply reduce operating costs, and bring luxury service within the reach of additional millions of the public.

**T**o determine the real profit possibilities of the new trains which are gradually being introduced to the American public with glamorous names and a touch of Hollywood fanfare, requires a more thoroughgoing study than that of Coverdale & Colpitts. This is not meant to detract from the value of the latter as a preliminary study. But real statistical research for the railroad industry appears to be sadly lacking, despite the wealth of basic material compiled at enormous expense. Much of our published statistics on railroads present a wealth of worthless minutiae while major statistical problems and the charting of important trends receive scant attention. Railroad statistics need to be streamlined.

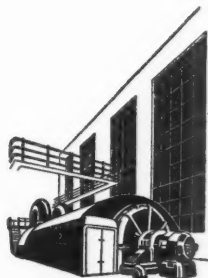
The passenger service of the railroads, while far less important to the national economy than in earlier dec-



## MUST RAILROADS LOSE 84 CENTS ON EACH PASSENGER?

ades, still deserves greater attention from economists and politicians than it is currently receiving. If it is to be regarded as a luxury service—and here it is threatened by the air lines—fares should undoubtedly be raised. On the other hand, if the newest type streamlined, popular fare trains will restore enough traffic to make them really profitable, the government should encourage their use by all railroads through special RFC loans, easy

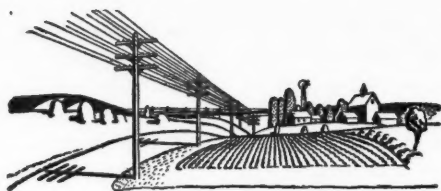
amortization rules for old equipment scrapped, etc. There seems little doubt that Diesels permit large savings—the roads have been too slow to adopt them. But what we need to do first is to streamline our cost figures, and pay more attention to them. If the railroads are to remain in private hands and attract new junior capital in the future, they cannot indefinitely continue to subsidize the passenger business at the expense of the freight.



## Electric Industry Misunderstood?

*"... the electric utility industry . . . is less understood and less appreciated than most others. We are in that unfortunate position because the product that the utility manufactures and sells is mysterious in itself. It cannot be wrapped up in a pretty container, nor placed on attractive display. Instead of streamlined trucks delivering the utility product, it travels out of sight of the purchasers, either underground or on so-termed 'unsightly' poles far above their heads. Don't touch it—it's dangerous! But here's the bill for it in the terms nobody knows—and the customer ejaculates, 'What in hell is a kilowatt hour?' 'Your rates are too high.' It is a near tragedy that electric service which plays such a stupendous part in human existence must take it on the chin as the result of these and other agencies beyond our control."*

—C. E. GREENWOOD,  
Commercial director, Edison Electric Institute.



## Electric Power on the Farms Aids National Defense

How rural electrification increases farm production with less labor, and otherwise directly serves defense projects — importance first observed in foreign countries — present needs.

By HARRY SLATTERY

THE widespread availability of electric power in rural areas has long been a primary objective of farm organizations and of farm and other national leaders in the United States. Looking toward the long pull for a more stable agriculture and a better balance in the income and welfare of agriculture, industry, finance, and business, they perceived that electric power was no longer a luxury but a necessity to twentieth century needs of living and production for rural as well as urban people.

In advocating the adoption of a Federal rural electrification program—under which already nearly 325,000 miles of line have been constructed—these leaders foresaw that the benefits of rural electrification extended far beyond the farms alone and would have a marked influence in rural life generally, including the revitalizing of rural industry and processing, trade, churches, schools, and other community

and village activities. Experience of REA and the 718 operating power systems which it has financed reveals the basic soundness of this approach.

The adoption of the Federal rural electrification program was, therefore, advocated by farm and public leaders on the basis of peace-time pursuits in order to improve the status and welfare of the rural community; but they builded better than they knew. For with the development of the grave international situation and the outbreak of war abroad, rural electrification took on a new aspect as a real factor in our national defense program. It came to be recognized that the defense program, particularly total defense, required many varied types of activities throughout the entire nation in both rural and urban areas, and that electric power was an essential factor to the successful prosecution of many of them. As a consequence, REA-financed rural power systems, located

## ELECTRIC POWER ON THE FARMS AIDS NATIONAL DEFENSE

in over 2,300 counties, are today making electric service available not only to defense projects as such but also to many equally essential collateral activities involved in a total preparedness program.

FOR defense and military purposes the importance of rural electrification was perhaps first observed in the major European countries where the percentage of farms electrified in 1935 was far ahead of this country, ranging from 50 to almost 100 in contrast to about 10 in the United States. The Proceedings of the Third World Power Conference in 1936 indicated that the widespread electrification in some of those countries was due in part to recognition of the importance of rural electrification as a tool of "total war" or "total defense" and therefore was included as a part of the planned program of preparation for defense or war. It has been reported that in Germany the government provided many farms with considerable electrically driven equipment in order to maintain or increase production and thereby release many farm men for military service and factory work. A rather vivid example of how rural electrification has made possible a high degree of decentralization of industry and "farming out" in Germany was described by Morris L. Cooke, first administrator of REA and at present consultant on management engineering on the staff of the associate director general of the Office of Production Management, in the following words:

In 1937 sealed crates were delivered to electrified farms all over the nation. Instructions were given out not to open these crates until further notice. They were said to contain special machinery with which the

farmers of Germany would, in their spare time, capture the toy market of the world. The day Nazi legions crossed the border of Poland, word was sent out to open the crates. They turned out to contain, not toy machinery, but equipment with which to make the thousands of little parts which go into the production of modern weapons of war. The parts made by these machines went into the tanks, guns, and planes which, the following spring, rolled back the armies of Belgium, the Netherlands, and France.

Likewise, in England, one aspect of the importance of rural electrification to defense is indicated by the following quotation from the *Electrical Review* (London):

Home food production is very much in the news at the moment, and the nation may well thank those electricity supply authorities which, by their enterprise in providing supplies to sparsely populated and barely remunerative rural areas, are now making it possible for farmers to employ electrical methods to aid food production and storage.

ONE of the most important contributions that rural electrification offers to our growing national defense program and to fulfilling our promise of all-out aid to nations fighting for our safety is in supplying power to help American agriculture meet its problems of labor supply and of increased demand for protein and other critical foods essential for proper nutrition. As a result of accelerated industrial production and the requirements of the armed forces, there is developing, particularly in specialized areas producing dairy, poultry, and truck crops, a serious shortage of farm labor. The general index of farm labor supply declined from 100 in April, 1940, to 82.2 in April, 1941. As preparedness activities continue to become more widespread and intensified, and the demands of the armed forces continue to increase, it is apparent that more labor will be drained away from farms. The Bureau of Labor Statistics estimates

## PUBLIC UTILITIES FORTNIGHTLY

that defense industries will require nearly one and a half million more workers by April, 1942, than there were in May, 1941. As a consequence, already there is an increasing demand for labor-saving farm equipment, much of it requiring electric power for its operation, such as milking machines, pumps, ensilage cutters, brooders, and other power equipment. Where electricity is available, many farms will be able not only to maintain their production of vital foods with less man power but many will materially increase their output. It has been estimated that the application of electric power to the activities of an average farm will provide the equivalent of one farm hand at an investment of less than the annual wages of a farm laborer. It is unfortunate indeed that, notwithstanding the substantial progress made during the past six years, in this time of national emergency not more than 30 per cent of our farms have central station service.

**W**ITHOUT consideration of its labor-saving significance, electricity has become an essential technical factor in the production of many forms of protein foods of which there is a shortage and of which increased production is imperative if the nutritional needs of our people and the re-

quirements of the lend-lease arrangement are to be met. Because of its efficiency as a source of light, heat, and cold as well as of power, electricity has been applied widely to the production of protein foods of which there is immediate need for more production. Electric hatching and brooding produce a larger output of poultry per unit of effort and of expense; lighted poultry houses mean that poultry feed longer, grow faster, and produce more eggs; poultry, milk, and milk products are processed, handled, and marketed with less wastage when electricity is available; a plentiful and automatic water supply for the dairy, poultry yard, stock tank, and irrigation increases production; electric milking machines, cream separators, coolers, and other dairy equipment improve efficiency and maintain quality; electric refrigerators provide proper storage of perishable products, including eggs, milk, and vegetables; and the preparation of feeds for animals is promoted by electrically driven equipment.

The migration of workers from some rural areas to urban defense industries, and the increasing needs for protein foods to meet the nutritional requirements of both our own people and those of foreign countries that we have promised to aid, present growing critical problems to the nation and agri-



**Q** "THE Bureau of Labor Statistics estimates that defense industries will require nearly one and a half million more workers by April, 1942, than there were in May, 1941. As a consequence, already there is an increasing demand for labor-saving farm equipment, much of it requiring electric power for its operation, such as milking machines, pumps, ensilage cutters, brooders, and other power equipment."

## ELECTRIC POWER ON THE FARMS AIDS NATIONAL DEFENSE

culture. The alleviation of these problems is dependent primarily on a substantial increase in the use of modern labor-saving equipment. It is, therefore, important that we make every effort to extend electric service into the critical production areas as rapidly as possible.

In addition to its importance in alleviating the problem of farm labor shortage in critical areas and in promoting the production of certain critical protein foods, rural electric service has been of immediate importance to defense and related projects that have been located in rural areas.

**A**VAILABILITY of electric service from rural power systems in areas where many of the new defense projects have been located has proved to be of substantial benefit both to the projects themselves and to the surrounding countryside which has been called on to render many collateral services incident to their construction and operation. REA-financed systems have been called on to serve a great variety of defense projects, including camps, bases, forts, munition depots, and dumps, housing projects, air field beacons, radio beam stations, and many lesser loads related directly to the defense program. As a consequence, defense projects served by the coöperative power systems are enabled to obtain their power at low rates.

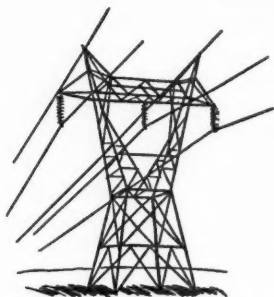
In a number of instances, such as at Camp Shelby, Mississippi, Fort Leonard Wood in Missouri, and Camp Forrest, Tennessee, REA-financed coöperatives have been in a position to make service available to Army camps promptly and at low cost. In making

service available to Camp Shelby, for instance, the line and substation for the construction load were completed twenty-four hours after receipt of the order from the War Department; and the large substation and 7½ miles of 110,000-volt transmission line from the power source to the camp were completed within fifty-two days. Inasmuch as the coöperatives are nonprofit organizations they provide the defense projects with service at cost. Further, they do not require cash contributions toward construction costs inasmuch as the facilities will continue to be used to serve farms and other consumers after the emergency period has passed.

**B**ECAUSE of their wide coverage, the coöperative rural power systems are receiving increasing requests to furnish electric service to farms and others located in the vicinity of major defense projects. The location of some of these projects in rural areas of relatively sparse population and limited agricultural productivity has resulted in a tremendous step up in the demand for perishable foodstuffs. With electric power available, near-by farmers are enabled to increase the production of eggs, milk, and other perishables and have refrigeration for proper storage.

The systems also have been called on to meet the power requirements of many collateral activities in the vicinity of defense projects such as for additional housing, commercial establishments, and recreational facilities. In the vicinity of Camp Blanding, Florida, the Clay County Electric Coöperative has constructed numerous short extensions to serve attendant defense loads with a consequent multiplying of its defense load by four times.

## Increasing Demand for Power



**"T**HERE is accumulating evidence . . . that the increasing demand for power being placed on the systems as a result of both the preparedness program and the normal growth in loads may have to be met with additional generating capacity. If it is found necessary, a large capacity in small generating units can be built on a mass-production basis; and these units could be made to provide a flexible source of power that could be adjusted easily to meet the needs of the systems."

In some areas, because of the shortage of firm power, the coöperatives have found it necessary to provide additional generating capacity to meet defense requirements. In order to supply the new Marine Base at Jacksonville, North Carolina, for example, the Jones-Onslow Electric Coöperative has started construction of two generating plants and 50 miles of transmission line with an installed capacity of 13,000 kilovolt amperes. After the emergency this capacity will be available to serve farms and other enterprises in the area at rates somewhat lower than those now in effect.

**O**NE of the significant effects of the extension of electric service into rural areas has been the development of a large number and variety of small decentralized industrial enterprises. For normal peace-time operations the value of decentralized industries has long been recognized because of their contribution to the income and stability of rural communities; for defense purposes, such industries make possible the full utilization of facilities and man-

power through "farming out" with the least possible migration of workers. Among the industries served by REA-financed systems at the present time there is a number that are making a direct contribution to the defense program through the production of strategic materials and the processing of farm products of which there is a shortage.

In addition, there are many more of these systems capable of making a valuable contribution if and when it is deemed essential to distribute the production of military material among innumerable small units widely scattered throughout the country. Many of these enterprises sprang up after electric power was made available by the coöperatives and surveys show that the number and variety are increasing rapidly. During 1940 there was a 20 per cent increase in the types of industries on REA-financed lines, a 53 per cent increase in the number of plants, and an 86 per cent increase in the kilowatt demand of such industries. During the first six months of 1941 the systems received



## ELECTRIC POWER ON THE FARMS AIDS NATIONAL DEFENSE

requests for service each month on the average from 50 additional enterprises with demands exceeding 3,000 kilowatts. Among the industries that are contributing to the total defense program are: cold storage plants, hatcheries, dairies, food-processing plants of many types, mines, oil wells and pipe lines, building supply plants, machine shops, aluminum plants, textile mills, and chemical industries.

A NUMBER of the mines served by the rural power systems are producing extremely important raw materials having direct military significance and of which there is a scarcity. These include vanadium, cinnabar, lead and zinc, copper, and manganese. The presence of a near-by rural power system played an important part in the opening of certain cinnabar mines in Arkansas. These are marginal mines, closed under normal conditions because not profitable. Military requirements for mercury made it important that these mines be brought back into maximum production, and the increase in price of mercury made this possible provided relatively cheap power were available. The construction of a tie-in line from a neighboring REA-financed system solved the problem of availability of power at low cost.

It has been highly gratifying to observe the active participation of the rural electric coöperatives in furthering the national defense program in their communities. Their efforts show a desire to be of the greatest possible service in time of national emergency. The work of the Shenandoah Valley (Va.) Electric Coöperative has attracted nation-wide attention in this regard. This coöperative sponsored a sur-

vey of the resources of the area served by it and was instrumental in the establishment of the Shenandoah valley defense council which was organized as a coöperative to enable the small industrial plants in the area to assist in the national defense program.

In the predominantly rural area served by the rural systems the coöperative discovered that there were 375 machine tools adequate for use in the production of defense materials and enough skilled labor to operate these tools for sixteen hours per day. These skilled workmen for the most part were not registered with any state or Federal employment agency, and the small industries had not been included in any defense production plans.

REA and REA-financed systems are working to alleviate power shortages at critical points in the defense program. As has already been indicated, some of the rural power systems are providing for additional capacity in their areas where there is a shortage of firm power. For emergency purposes some of the systems have organized power reserve coöperatives to own and operate mobile Diesel generating plants that are mounted on trailers for rapid transportation to points where the regular power supply has been disrupted. A number of these units are now in successful operation on REA-financed systems and additional units are on order.

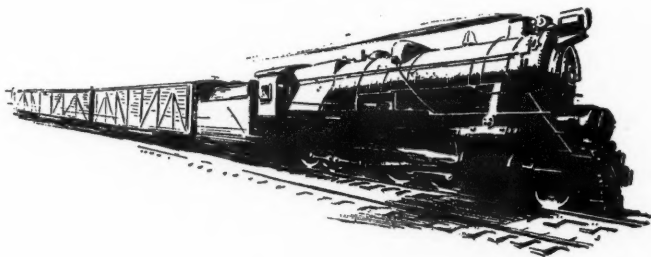
There is accumulating evidence, however, that the increasing demand for power being placed on the systems as a result of both the preparedness program and the normal growth in loads may have to be met with additional generating capacity. If it is

## PUBLIC UTILITIES FORTNIGHTLY

found necessary, a large capacity in small generating units can be built on a mass-production basis; and these units could be made to provide a flexible source of power that could be adjusted easily to meet the needs of the systems.

Any capacity added at the present time to meet defense requirements would not constitute surplus capacity

after the emergency because it would soon be absorbed by the systems in rendering normal service to an increasing number of farms and other rural users. This indicates that any expenditures made today by the coöperatives for additional generating capacity to alleviate power shortages occasioned by defense requirements would have a 100 per cent post-emergency value.



### Federal Control of Railroads

**"I**N my opinion there is one insuperable objection to government ownership and operation [of railroads]. It is hard to conceive of such an operation free of those political influences that would more than counterbalance any advantages from unified government ownership and operation.

*"In my judgment, the evolution of transportation in the last three decades has made government ownership of railroads increasingly undesirable. Three decades ago air and pipe-line transportation were unknown, water competition was of minor importance, and highway transportation, instead of being a competitor, was a feeder to the railroads. Now all of these agencies are important factors in our transportation system. They are in competition with each other. How could we expect privately owned and operated transportation agencies to compete on a fair or equal basis with publicly owned and operated railroads with the political favors they would receive? The natural evolution of the government ownership plan would be to take in all the competing agencies with a duplication of service and deficits."*

—CLARENCE F. LEA,  
Chairman, House Committee on Interstate  
and Foreign Commerce.



## Wire and Wireless Communication

**B**RANDING the proceedings illegal, the American Newspaper Publishers' Association informed the Federal Communications Commission in Washington on July 23rd that four subpoenaed newspapermen would refuse to appear as witnesses at the commission's investigation of newspaper ownership of radio stations.

The challenge to the commission's authority was made by Elisha Hanson, ANPA general counsel, at the opening hearing of an inquiry designed to establish a policy for future ownership of stations by newspapers. The four subpoenaed men are Lieutenant Commander James G. Stahlman of the *Nashville Banner*, a former president of the association, now on active duty with the Navy; Edwin S. Friendly, business manager of the *New York Sun*; Arthur Robb, editor of *Editor & Publisher*; and William A. Thomson, New York, director of the Bureau of Advertising of the ANPA. The commission did not indicate whether it would take steps to compel the men to appear.

As the hearing opened, Chairman James L. Fly informed Hanson that the commission had rejected an association request for termination of the investigation and would not hear arguments on the question at that time. The FCC said:

It seems inconceivable to us that an argument could be seriously advanced against the inherent power to hold hearings of any administrative agency, endowed by statute with power to hold hearings, issue subpoenas, etc., to conduct general hearings of the type involved here.

Denied the right to argue in behalf of his petition, Hanson filed a lengthy statement in which he said that the commission lacked authority to investigate any of the matters outlined by it as within the scope of the inquiry. He added:

Furthermore, I also submit that the questionnaire which the commission sent out on June 28th to present licensees deals with subject matter over which the commission has no authority either under the statute or as construed by the courts. That questionnaire is nothing more nor less than an impertinent effort on your part to inquire into the newspaper publishing business . . .

**F**LY said the inquiry would touch on the newspaper business only in so far as it concerned radio. Fly read an opening statement in which he said that the question of newspaper ownership of radio stations had been "a topic of interest both in Congress and elsewhere for a long time." He added that because of the large number of newspaper applications for frequency modulation stations (43 out of 99), the commission had decided to hold a general inquiry rather than pass on the issue in each application.

The commission, he said, had "reached no conclusions or opinions," and would give attorneys ample time to argue legal questions before promulgation of any rules placing newspapers on a different level from other applicants.

Thomas D. Thacher, counsel for the Newspaper - Radio Committee, also sought to argue legal considerations, but Fly said the commission did not think there was any question of the commission's right to conduct the investigation.

## PUBLIC UTILITIES FORTNIGHTLY

Terming the investigation "double-headed," Thatcher argued that under decisions of the Supreme Court the commission had no authority to make distinctions between applicants. He contended that the commission had "ignored the statutory mandate" in placing newspaper applications in a "pending" file, instead of acting upon them individually, and asked that the inquiry be called off until they had been acted upon.

\* \* \* \*

**A**N interesting illustration of telephone rate economics was seen in the differences between the Dallas, Texas, utilities supervisor and the Southwestern Bell Telephone Company. Both sides appeared to agree that recent telephone rate cuts in Houston and San Antonio should be followed by a cut in Dallas. Negotiations for lower telephone rates were ordered sometime ago by the Dallas city council, upon the suggestion by Frank R. Schneider, utilities supervisor. A subsequent agreement upon a reduction of \$365,000 seemed certain to be approved.

Previously, the city official had demanded a bigger cut than the company thought it should give. The difficulty appeared to be that the factual situation in Texas represents a departure from a general rule of telephone rate making, to the effect that the larger the city the higher the rate should be (because of the more expensive and more valuable service). On this basis Dallas would have a lower rate than Houston, which has a larger population and more phones. However, because Houston has been growing very rapidly in recent years it has been using its telephone plant at a considerably greater capacity than the slower growing city of Dallas.

Telephone earnings in Houston during recent years are reported to be in the neighborhood of 7.5 per cent of plant value. In Dallas the company's earnings have averaged less than 6 per cent in the last decade. Last year the figure was 5.5 per cent, although it may be higher for the current year as a result of new building and industrial activities.

AUG. 14, 1941

Thus it seems likely that Houston with its recently lowered telephone rates will earn more for the company than Dallas even prior to the Dallas reduction.

The Southwestern Bell had under discussion a voluntary Dallas rate reduction before the present controversy arose and since offered a reduction that did not in all instances duplicate the Houston rates. This offer did not meet the present demands of city officials, but the figures were not far apart.

\* \* \* \*

**T**HE Michigan commission is evidently hesitating to promulgate a "show cause" order which would require the Michigan Bell Telephone Company to reduce rates, chiefly in Detroit. The amount of the tentative reduction is unofficially reported to be around \$800,000 a year. However, recent economic developments have apparently led the commissioners to study the proposal more carefully, and hearings will probably be postponed until next fall—perhaps indefinitely.

\* \* \* \*

**I**T is not expected that the FCC will take very seriously the suggestion made to Chairman Fly recently by Commissioner Beamish of the Pennsylvania Public Utility Commission that cut-rate long-distance telephone service during off-peak hours should be provided for Army men as a "morale builder." Informal legal opinion within the commission indicates that the FCC has no authority to order such rate preferences. Army officials were said to be equally cold to the suggestion. Seems the Army is having trouble enough breaking "apron strings" of newly drafted selectees, without encouraging long-distance conversation by homesick soldiers.

\* \* \* \*

**T**HE Southern Bell Telephone Company has eliminated a 10-cent service charge on intrastate long-distance calls, effective July 10th. The company early last month notified the Tennessee utilities commission that it would drop

## WIRE AND WIRELESS COMMUNICATION

the service charge, which the commission's attorney, Lon MacFarland, estimated would cost the company approximately \$23,300 annually in revenue.

Under negotiation was a proposal by the state commission that the company reduce its intrastate rates. Commissioner Leon Jourolmon said a show-cause order might be issued unless Southern Bell equalizes the rates which now charge 25 cents less for a 500-mile call to a point outside of the state than a call of the same distance between points in the state.

\* \* \* \*

FROM St. Louis, Missouri, comes news of a relatively new industrial usage of the telephone. With increased use of the phone to transmit orders, specifications, and other messages which, but for the requirement of speed, would be committed to writing, a device to record telephone conversations is coming into use at some defense plants.

Such instruments have been installed by the Curtiss-Wright Corporation at Lambert-St. Louis field, and by the Western Cartridge Company, which is building a small arms ammunition plant at Goodfellow and Bircher boulevards. A similar instrument, operating independently of a telephone, is used at the cartridge company plant to record round-table conferences.

The telephone company will not permit the use of these devices except on private or leased lines, where all users of the service know that conversations are recorded.

\* \* \* \*

THE University of Alabama announced last month a course in communications technology, consisting of 1,293 hours of class work and utilizing more than \$75,000 worth of equipment, will be open without charge this fall to thirty young men. The new course, the only one of its kind in the country, is a part of the university's statewide defense training program and is designed to meet a pressing need for 12,000 men with technical knowledge of radio and telephony.

Teaching the course will be John S. Carlile, for many years chief of production for the Columbia Broadcasting System and one of the nation's outstanding men in the field of radio. He is now professor of radio arts at the University of Alabama.

Applicants for the 27-week course should address inquiries to the university's engineering defense training division or to Professor Carlile in the department of radio. In general, applicants should possess a high school degree, or its equivalent, and be prepared for study in mathematics, electronics, physics, and mechanics.

\* \* \* \*

ON July 31st Senator White, Maine Republican, introduced a new bill for the regulation of the FCC. The Senator hinted that he would not press for action until the Senate Interstate Commerce Committee had completed its recent consideration of his resolution to investigate radio regulation under the FCC.

The principal provision in Senator White's bill, as far as the FCC is concerned, is a proposed divorce of radio broadcasting regulation from the regulation of commercial communications carriers, such as telephone, telegraph, cable, and point-to-point radio. Specifically, the bill would divide the FCC into two segments of three commissioners each: (1) the division of public communications—radio broadcasting; (2) the division of private communications—telephone, telegraph, etc.

The three commissioners of each division would have exclusive jurisdiction within their own province. This would leave the chairman of the commission as an executive officer, participating in deliberations of the commission only with respect to certain general matters over which the Senator's bill would have the full body of the commission act. These general matters would include rules of general application—procedural rules and regulations, amateur services, emergency services, licensing of operators, assignment of frequencies, etc.





# Financial News and Comment

By OWEN ELY

## "Death Sentence" Litigation Looms

WHILE a number of holding companies which formerly threatened to carry the "death sentence" to the courts have receded from their position, it now appears likely that the lines have been drawn for a belated test. The SEC on July 23rd formally ruled for the first time that utility properties retained by a holding company must, under its interpretation of the act, be confined to one state or states which adjoin one another—in other words a single area. It even went further and ruled that an interest of less than 10 per cent could not be retained in a company outside the given area.

These opinions, the end result of many years' sparring and debate between the SEC and the utilities, were announced in connection with an opinion that the Engineers Public Service Company must choose between Virginia Electric & Power and Gulf States Utilities as the principal system subsidiary. This furnishes a technical basis for the litigation which Engineers (smallest of the nine major holding companies against which the SEC has concentrated its integration program) had previously stated that it would initiate.

With Engineers preparing to "go to the mat" on geographic integration, Commonwealth recently indicated that it might seek a court test on corporate simplification, if the SEC directs it to reduce its capital structure to one class of stock. Commonwealth has made many concessions to the SEC since the aggressive Mr. Willkie left the company, but now seems prepared for a show-down over its plan

for retiring preferred stock through an exchange offer for shares of northern companies, leaving common stockholders the less valuable equity in the southern properties.

Another issue still open is the question of retaining all the southern properties as an integrated group.

THE Supreme Court sometime ago refused to pass on the constitutionality of § 11 but at that time the SEC had not taken clear-cut action. Doubtless the high court will now be more willing to consider the issue. The change in the complexion of the court in recent years, including as it does a former chairman of the SEC and other outstanding New Dealers, may, of course, make the overthrowing of § 11 far less likely than would have been the case when the act was originally passed. The only section of the act considered by the court in earlier years was the registration section, of far less importance than § 11. North American Company has recently sought redress in Federal district courts regarding minor phases of SEC administration of the act. It lost the Detroit Edison Case, and the North American Light & Power Case appears headed for compromise out of court.

It remains to be seen whether Electric Bond and Share or American Power and Light will contest the SEC's pending or threatened action toward "subordination" of the parent company's holdings of senior securities to the junior securities (of the subsidiary) held by the public. Another article in this department deals with the recent Supreme Court decisions which furnish apparent precedents for the SEC policy.

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## FINANCIAL NEWS AND COMMENT

### *International Hydro-Electric*

**I**NTERNATIONAL Hydro-Electric (hereafter referred to as "Hydro") is a Massachusetts voluntary association whose major investments include common stock holdings in Gatineau Power of Canada, New England Power Association (a subsidiary holding company system), and two New York operating subsidiaries—Hudson River Power and System Properties, Inc.—which furnish a considerable amount of power to International Paper. The company's capitalization now consists of \$26,568,000 debenture 6s due 1944, 144,799 shares of \$3.50 preferred, and 858,197 shares of Class A. The 1,000,000 shares of Class B and 2,500,000 shares of common stock, formerly owned by International Paper and transferred in 1939 to liquidating trustees, have recently been surrendered to the system and canceled, partially reducing an unwieldy capital structure. The bonds are currently selling at about 38, the preferred around 4, and the Class A around 1.

In order to estimate the intrinsic value of the bonds it is necessary to appraise the potential market value of Hydro's investments. Over half of Hydro's current income is received from Gatineau Power,\* of whose common stock Hydro holds 1,439,024 shares (86 per cent). The minority stock is currently quoted on the Curb Exchange at  $5\frac{5}{8}$ - $7\frac{1}{8}$  and, taking a round value of 6, Hydro's investment would be worth about \$8,600,000. This value would appear to be conservative since the stock paid 80 cents last year and 40 cents for the first half of this year. The discount on Canadian funds and the 15 per cent Canadian nonresident tax now reduce the net annual rate to around 60 cents, and it is possible that the dividend rate also may be reduced in the second half owing to rising Canadian income taxes. It seems likely that only about 44 cents net (some \$632,000) can safely be counted on for 1942.

Hydro has been receiving annually

from its two New York companies about \$700,000 or more in recent years, in the form of dividends, interest on advances, and (in some years) repayments on advances. These companies do not make public any earnings statements, but their business is mostly wholesale (including leasing of partially developed water power properties in Maine and New York) and earnings are understood to be stable at a level somewhat above the total payments made to Hydro. Moreover, the hydro sites owned by these companies are only about one-third developed, and with the war-time demand for power they may be able to dispose of undeveloped sites profitably. (Several sales have been made in recent years.) It is understood that Hydro's equity in the properties should, over the longer term, prove quite substantial, although the extent to which it could "cash in" at this time is, of course, difficult to determine.

From the available information it would seem proper to allow a generous price-earnings ratio, and we therefore set an arbitrary value for the properties of around \$8,000,000; should undeveloped sites be disposed of, the figure might run as high as \$14,000,000 or more.

**H**YDRO-Electric owns 821,780 shares (88 per cent) of the common stock of New England Power Association. While this is the biggest of its subsidiaries, senior capital absorbs a large proportion of system earnings. Earnings have been reported for some years on the common, but have fluctuated rather widely due to the capital set-up. In 1940 (a relatively bad year due to a holdover of 1939 drought conditions) only about 29 cents was earned for the common, compared with \$1.20 in the previous year. The minority stock (on the Curb) is currently quoted  $3\frac{1}{4}$ - $4\frac{1}{4}$ ; at  $3\frac{1}{2}$ , Hydro's holdings would be worth about \$2,850,000. However, while the New England company has little to worry about so far as geographical integration is concerned, the holding company structure is quite involved (there being from two to five "layers" of companies). Considerable

\* See FORTNIGHTLY of July 3rd, page 33, for brief description of Gatineau.

## PUBLIC UTILITIES FORTNIGHTLY

spade work must be done in the elimination of subholding companies like Massachusetts Power & Light, North Boston Lighting, Rhode Island Public Service, etc. There are also some small dividend arrears on New England's preferred stocks. (No common dividend has been received by Hydro since 1934.) Hence, on an ultraconservative basis, Hydro's investment in the system should probably be "written off" completely.

Ignoring miscellaneous investments, the value of which is probably negligible, we arrive at the following estimates of liquidating value for Hydro:

	<i>Present Estimated Value</i>	<i>Possible Future Value</i>
Gatineau .....	\$8,600,000	\$10,000,000
Hudson River Power and System Properties, Inc. }	8,000,000	14,000,000
New England Power Assn. ....	2,860,000	(?)
Net Current Assets, about .....	540,000	540,000
Total .....	\$20,000,000	\$24,540,000
Amount per \$1,000 debenture bond ..	\$750	\$920

As compared with the current market price around 38, therefore, the bonds would seem to have an adequate liquidating value to warrant an eventual recovery to higher price levels. Presumably liquidation of investments might be completed before 1944, when the bonds mature. However, the question which is probably uppermost in investors' minds at present is whether interest payments will be continued. While the income from Gatineau is declining, that from the New

York properties seems dependable and might even increase somewhat, due to larger power demands in this territory. Hydro's interest requirements amount to \$1,594,000, while expenses and taxes are about \$157,000, making total requirements of around \$1,751,000. This amount may be taken care of in 1941-42 somewhat as shown in the table below.

THE amount which it is estimated may have to be drawn from surplus in 1941-42 totals \$574,000, which compares with net current assets at the end of 1940 (mainly cash) of \$539,880. It seems likely therefore that interest payments may continue through 1942, but of course Gatineau may face still further tax increases next year, or other difficulties may intervene.

The estimated 1941 dividend from Gatineau is adjusted for a possible reduction in the quarterly dividend rate from 20 cents to 15 cents, at the August 15th meeting, corresponding to a pending retroactive increase in the Canadian income tax for 1941, though it is possible that the cut in the dividend rate may not be made till later.

Hydro may be able to increase its income from Hudson River Power and System Properties, Inc., if the SEC will permit a merger and refinancing of these properties—approved by the New York state commission but held up by the SEC last December; the plan would have produced interest savings estimated at \$165,000 per year.

Investors may well be puzzled over some phases of Hydro's bookkeeping. In addition to the problems surrounding the New England Power Association set-up,

	<i>Approx. 1940</i>	<i>Est. 1941</i>	<i>Est. 1942</i>
Dividends from Gatineau, net after tax and loss on exchange	\$985,276	\$780,000	\$632,000
Interest, dividends, etc., from Hudson River Power and System Properties, Inc. ....	702,863	750,000	750,000
Miscellaneous receipts .....	8,923	8,000	8,000
From earned surplus .....	53,938*	213,000	361,000
Total .....	\$1,751,000	\$1,751,000	\$1,751,000

\* Cash was reduced \$77,649.

and the paucity of information regarding the New York companies, the parent company's 1940 income statement is complicated by a deduction from dividend income of \$845,272 as "portion representing return of investment." The consolidated system statement, which in 1937 showed earnings of as much as \$15.62 on the preferred and \$2.03 on the Class A stock, is of comparatively little value in analyzing the investment status of Hydro securities. In the first quarter alone of 1941 earnings of \$2.23 a share on the preferred were reported, against only 97 cents for the entire year 1940. The figures reflect the high degree of system leverage but do not indicate the actual income for parent company securities, which is revealed (rather belatedly) in the annual reports.

While the bonds appear to have potential value in excess of present market price, the preferred and Class A stocks would seem to have rather dubious future prospects.

### *The "Subordination" Principle: Digest of Supreme Court Cases*

IN the previous issue (pages 163-4) certain applications of the so-called Deep Rock principle by the SEC to various utility holding company situations were discussed. It may be of interest to analyze several of the more recent Supreme Court decisions on which the SEC is alleged to have based its views regarding "subordination" and note to what extent a parallel exists between the corporate relationships involved in these cases, and the relationships normally existing between utility holding companies and their subsidiaries. The importance attached to some of these opinions by the SEC is perhaps due in part to the fact that the former chairman, Mr. Douglas, is now a Supreme Court Justice and wrote the two latest of the three opinions here summarized.

The opinion in the celebrated Deep Rock Case (John M. Taylor et al. v. Standard Gas & Electric, #312, rendered February 27, 1939) summarized the very

involved record of financial transactions since 1921 between Standard Gas and its subsidiary, the Deep Rock Oil Corporation, which went into receivership in 1933 under § 77-B. While the subsidiary was (in theory) separately operated, the accounting was under the control of the parent company and there were numerous intercorporate items which remained on open account between the two companies. A summary of all these transactions indicates that Deep Rock owed Standard Gas some \$52,000,000 while it had offsetting credits of about \$43,000,000, leaving a balance due Standard of over \$9,000,000. However, of the \$52,000,000 debits, only about \$32,000,000 had been paid in cash by Standard to Deep Rock, the balance of about \$20,000,000 consisting of management fees, interest on balances, miscellaneous rentals (in dispute between the two companies), and dividends declared by Deep Rock but not paid.

In the reorganization proceedings of the Deep Rock company, the independent protective committee for the preferred stockholders, headed by John M. Taylor, attacked many of these latter items as fraudulent or excessive. A compromise between the preferred claims and Standard Gas was proposed which would have reduced Standard's claim to \$5,000,000, or about one-half. In this reorganization plan Standard would have received 73 per cent of the new common equity; the preferred stockholders, only 19 per cent. The Supreme Court felt that this compromise was unfair and hence overruled the lower courts.

The Supreme Court's decision was based not merely on technical questions of accounting interpretation but on the charge that Standard had mismanaged the company, manipulated the accounts, and retained control by unfair methods. It was said that "From the outset, Deep Rock was insufficiently capitalized, was top-heavy with debt, and was in parlous financial condition. Standard so managed its affairs as to always have a stranglehold upon it." The court also held that Deep Rock had been forced to pay dividends at a time when it had insufficient

## PUBLIC UTILITIES FORTNIGHTLY

cash and was borrowing large amounts from or through Standard. Hence the court ruled that the preferred stockholders not only should obtain a prior claim on earnings but also should have an equal voice with Standard in the new management. "Anything else would be to remand them to precisely the status which has inflicted serious detriment on them in the past." The court had no special objection to Standard's receiving an equity interest in the new company so long as such interest was subordinate to that given to the old preferred.

**T**HE Los Angeles Lumber Case (Thomas K. Case et al. v. Los Angeles Lumber Products Company, #23-4, November 6, 1939) also involved questions regarding the conditions under which stockholders might participate in a reorganization plan under § 77-B. Los Angeles Lumber was a holding company owning practically all the stock of six subsidiaries, only one of which (Los Angeles Shipbuilding) had any important assets. The equity in this subsidiary was the principal asset of Lumber Products, and the latter's principal liability consisted of first mortgage bonds (with unpaid interest) secured by the fixed assets of the Shipbuilding Company as well as the capital stock of all the subsidiaries.

A voluntary reorganization plan was effected in 1930, with the consent of about 97 per cent of the bonds, which reduced the interest rate and made interest payable only if earned. At the same time the stock was wiped out and Class A stock was issued against the \$400,000 new money contributed by old stockholders, which amount was turned over to the Shipbuilding Company for working capital. (A small amount of Class B stock was also issued to bondholders for unpaid interest coupons.)

In 1937 the management again prepared a plan of reorganization, which was assented to by over 80 per cent of the bondholders and 90 per cent of the stock, providing for a new company to acquire the assets of the Shipbuilding Company. The new company would

have had 811,375 shares of preferred and 188,625 shares of the common. Some of the preferred was reserved for sale to raise money, but a substantial part was to be issued to bondholders at the rate of 250 shares for each \$1,000 bond; Class A stockholders were to receive new common stock, no provision being made for the Class B.

The petitioners in this case owned bonds which had not consented to the 1930 reorganization and also had objected to the 1937 reorganization plan. The Supreme Court in its decision objected to giving the old stockholders, who had no real equity in the assets of the enterprise, 23 per cent of the assets and voting power in the new company, without any assessment. The excuse accepted by the lower courts for permitting them to retain this equity was that the old stockholders were familiar with the business, had "financial standing and influence," and would provide continuity of management; as well as the fact that under the existing arrangement bondholders could not foreclose until 1944 and stockholders had the right to manage the company until that time.

**I**N his opinion Justice Douglas stated: "Where a plan is not fair and equitable as a matter of law, it cannot be approved by the court even though the percentage of the various classes of security holders required by 77-B (f) for confirmation of the plan has consented." He cited a number of cases, including the Deep Rock Case, to illustrate former interpretations of "fair and equitable." In the Louisville Trust Case the court held that "the stockholders' interest in the property is subordinate to the rights of creditors; first of secured and then of unsecured creditors." In another case, it was said that "to the extent of their debts creditors are entitled to priority over stockholders against all the property of an insolvent corporation." However, this did not preclude granting stockholders a junior position in the new company, provided the senior security holders were granted equitable rights against the full value of all property. Also, in the case

## FINANCIAL NEWS AND COMMENT

of assessments stockholders might be allowed to "retain an interest sufficiently valuable to move them."

The Los Angeles plan, in the Justice's opinion, did not satisfy the principle that creditors enjoy priority over stockholders "to the extent of their debts," especially as stockholders were not assessed. The various reasons allowed by the lower courts for granting the stockholders an important share in the reorganization were considered invalid because "such items are illustrative of a host of intangibles," which "have no place in the asset column of the balance sheet of the new company."

A THIRD case, decided by the court on March 3, 1941, was Consolidated Rock Products *v.* duBois et al. (#400 and #444). Here again the question involved the terms of a reorganization under 77-B and Justice Douglas, former head of the SEC, again reported the court's opinion. Consolidated Rock Products and its two wholly owned subsidiaries had been operated practically as one since 1929 although separate accounts were kept. There were various intercompany claims which were under control of the parent company, and the status of the subsidiaries' bondholders (in reorganization) depended on the treatment of these claims. "It is claimed that the bondholders would have, as against Consolidated and its stockholders, prior recourse against any unmortgaged assets of Union and Consumers" (the two subsidiaries). "The full and absolute priority rule of Northern Pacific Railway Company *v.* Boyd, 228 US 482, and Case *v.* Los Angeles Lumber Products Co., *supra*, would preclude participation by the equity interests in any of those assets until the bondholders had been made whole." Hence the court held the claim of the subsidiaries against Consolidated would permit the bondholders to draw on the *entire* assets of Consolidated. This would render untenable the

contention of Consolidated stockholders that they were contributing all the assets of Consolidated to the new company and were therefore entitled to new securities. Actually, they were only making a contribution of such assets as would remain after any deficiency of the bondholders had been wholly satisfied. The court stated:

Equity will not permit a holding company which has dominated and controlled its subsidiaries to escape or reduce its liability to those subsidiaries by reliance upon self-serving contracts which it has imposed on them. A holding company, as well as others in dominating or controlling positions (*Pepper v. Litton*, 308 US 295), has fiduciary duties to security holders of its system which will be strictly enforced. . . . It is well settled that where a holding company directly intervenes in the management of its subsidiaries so as to treat them as mere departments of its own enterprise, it is responsible for the obligations of those subsidiaries incurred or arising during its management.

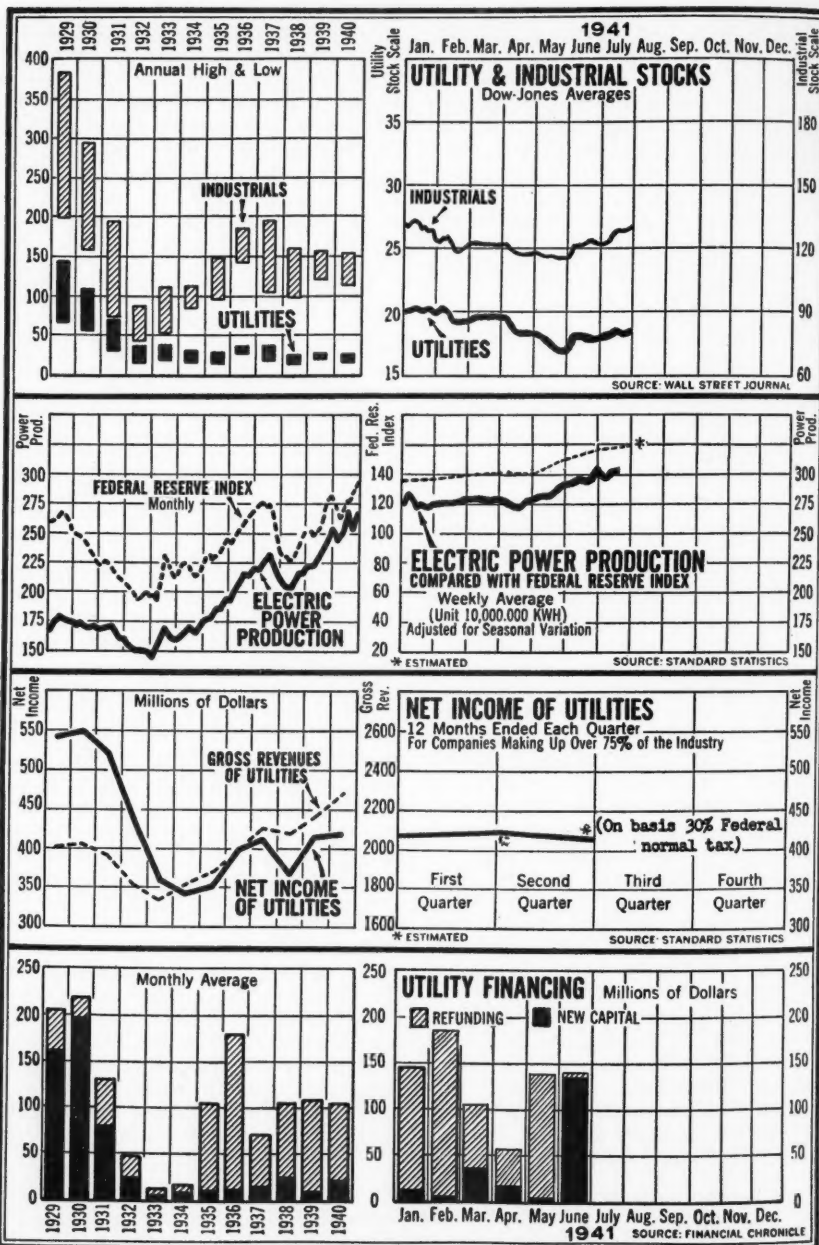
While the court admitted that "requirements of feasibility of reorganization plans" frequently require concessions to the "absolute priority rule" for bondholders, in the present case such concessions were too great.

Summarizing, the three cases all involved 77-B reorganizations, where subsidiaries had been operated almost as a department of the parent holding company, with little independent scrutiny of the intercorporate relations and accounting. In each case the earnings record was bad and the accounts were manipulated in favor of the parent company; hence little exception can be taken to the court's findings.

But it is assuming a great deal to assert, as the SEC appears to have done, that practically all utility holding companies' relationships with their subsidiaries are on this same low level of mismanagement and misappropriation. Each utility case should be studied on its own merits and a general rule-of-thumb principle or policy for the whole industry should be avoided.



# PUBLIC UTILITIES FORTNIGHTLY







# What Others Think

## Congress Investigates Natural Gas Act Changes



**I**N mid-July the House Committee on Interstate and Foreign Commerce opened hearings respecting a proposed amendment to the Natural Gas Act. The amendment was one introduced by Representative Clarence F. Lea of California (chairman of the committee).

As the act was originally written, subsection 7-c requires natural gas companies transporting gas for sale in interstate commerce to obtain certificates of convenience and necessity from the Federal Power Commission only in those cases where facilities are to be constructed or extended "to a market in which natural gas is already being served by another natural gas company." In other words, unless there is an element of competition between natural gas carriers FPC jurisdiction presumably does not obtain.

Representative Lea's amendment, which is based substantially upon the certification section of the Federal Motor Carrier Act, provides that every natural gas company engaged in or seeking to engage in the interstate transportation and sale of natural gas shall secure a certificate from the FPC.

The Lea amendment was supported at the committee hearings by the FPC through a statement prepared by Commissioner Basil Manly. He pointed out that the original subsection 7-c had proven unsatisfactory from the standpoint not only of the FPC but from the standpoint of natural gas companies and the producers of competitive fuels and operators of competitive methods of transportation (other than natural gas pipe lines). Commissioner Manly's statement continued:

As a result of numerous conferences which have been held with the representatives of the various groups that are most vitally interested in this legislation, it is be-

lieved that the [Lea] bill in its present form is acceptable to the Federal Power Commission, the public utilities commissions of the several states, as represented by the National Association of Railroad and Utilities Commissioners, the representatives of many of the natural gas companies, and the representatives of the labor, coal, and railroad interests. We have no knowledge of any substantial opposition being manifested to the amendment in its present form.

In view of this lack of opposition it will be sufficient merely to explain to the committee the difficulties which have been encountered in the administration of the existing certification section of the Natural Gas Act and point out the principal features of the amendment which is now proposed to remedy the situation.

The principal difficulties in administering the present § 7-c of the Natural Gas Act have centered around the fact that the commission's certificate-granting powers are limited to pipe lines to be constructed to "a market in which natural gas is already being served by another natural gas company." Neither the word "market" nor the phrase "in which natural gas is already being served" is defined by the statute.

As a result it has been necessary for the commission in considering the several applications for certificates of convenience and necessity that have been filed with it to conduct tedious and time-consuming investigations and hearings in order to determine whether the commission had the necessary jurisdiction to enable it to grant or deny the certificate for which application was being made. It may perhaps have been the thought of Congress that certificates would not be applied for except in those cases where communities now actually being served by a natural gas company were proposed to be served by a new competing company. In practice, however, it has been found that the promoters and builders of pipe lines find it necessary or desirable either to have certificates from the commission or to have an official determination that a certificate is not required. This is especially true where the proposed pipe line is to be financed by the sale of securities to the investing public or to financial institutions. This usually involves a long and tedious proceeding to determine jurisdic-

## PUBLIC UTILITIES FORTNIGHTLY

tion even before the merits of the case are considered.

COMMISSIONER Manly gave two examples of "the difficulties and complexities which arise in such proceedings." He first described the so-called Mesabi Range cases, which involve an application by an existing pipe line (Kansas Pipe Line & Gas Company) to extend its lines to serve communities and industries in the Mesabi Iron Range. About the same time a group of promoters (Public Service Gas Company) filed an application to construct a pipe line to serve substantially the same area. No natural gas was actually being served in that territory at the time. But the construction of either of the proposed pipe lines might well have encroached—through service along the right of way—upon the natural market territory of two other natural gas companies which, incidentally, had a natural market territorial difference between themselves.

It took the commission more than six months of hearings and investigations to determine its jurisdiction. These investigations included a study of gas reserves and capacities of these several applicants, together with a study of market surveys and local franchises and state certificates.

Eventually, proceedings were dismissed upon failure of the applicants to make an adequate showing of financial responsibility.

These Mesabi Range cases were productive of a definition by the commission. The FPC held that Congress intended the word "market" to embrace that territory within which a natural gas company can economically render adequate service by reasonable extensions of its facilities, having due regard, among other factors, to the sufficiency of its available reserves of natural gas. But even under this broad definition the commission found, in the so-called Milwaukee cases (the second illustration described by Commissioner Manly), that it did not have the jurisdiction necessary to deal with the complex situation there presented.

AUG. 14, 1941

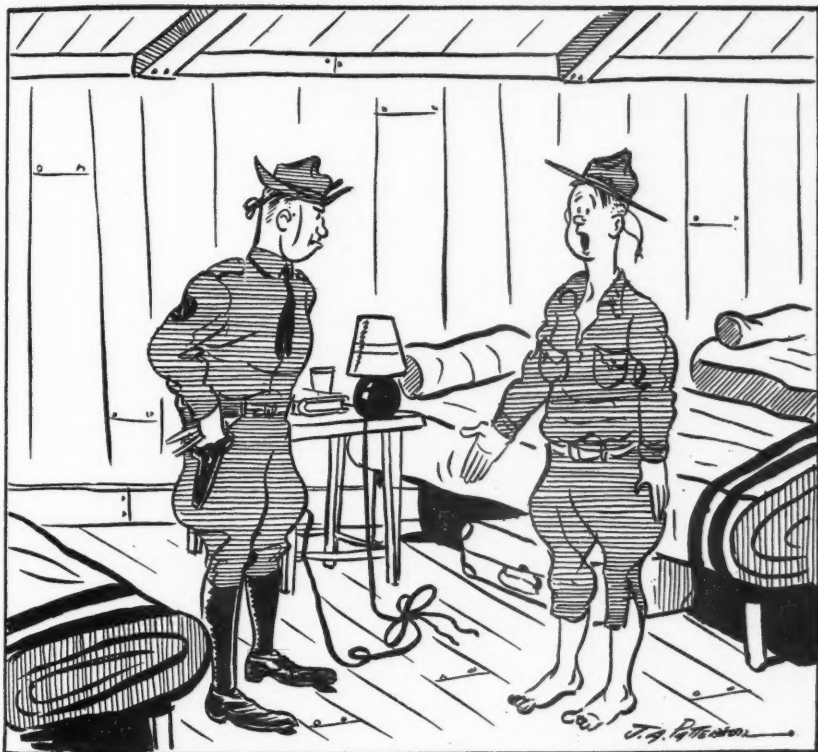
TWO applicants proposed to provide natural gas for southeastern Wisconsin, including Milwaukee. One applicant wanted to build a line from the Texas panhandle. The other wanted to build a line from the Hugoton, Kansas, gas field. No natural gas is presently sold in Wisconsin; but the Natural Gas Pipe Line Company of America, which serves Chicago, had purchased a right of way and started construction of a line toward the Milwaukee area. The FPC could not use this as a basis for jurisdiction, however, because it found that the pipe line to Chicago was already loaded to capacity and provided no surplus for Wisconsin. The Wisconsin commission is now investigating the situation with which the FPC found itself powerless to deal under the limitations of the Natural Gas Act.

Commissioner Manly also mentioned its inability to take jurisdiction in cases—not otherwise involving actual gas competition—upon complaint or protest of coal companies or similar competitive fuel and other interests, such as railroad and labor groups, which might be adversely affected by proposed pipe-line construction. Commissioner Manly's statement concluded:

... The commission necessarily concluded that if Congress had intended it to weigh the social and economic interests of competitive fuels and competitive methods of transportation it would have been given jurisdiction over all proposed natural gas pipe lines. As a result the representatives of the coal, labor, and railroad interests early this year announced their intention of seeking an amendment to the Natural Gas Act to clarify their rights of intervention.

Their concern was increased by the filing with the commission of an application by the Reserve Gas Pipe Line Company to construct a 26-inch pipe line from the gas fields of Texas to serve the metropolitan area adjacent to New York city. Under the facts as stated in the Reserve Company's application, it was doubtful whether the commission would have jurisdiction over this great project involving an investment of some \$80,000,000. This situation was highly unsatisfactory not only to the coal, labor, and railroad interests, but also to the representatives of the Reserve Company itself which felt that a certificate was necessary, or at least highly desirable, as a basis for its financing.

## WHAT OTHERS THINK



"BUT IT CAN'T BE THE CORD, SERGEANT, I FIXED THAT"

WHILE, as Commissioner Manly stated, no substantial opposition to the Lea bill developed at the House hearings, a broad point of state interest was brought out in an interesting memorandum supporting the bill, written by Colonel P. A. Frye, director of the Louisiana Department of Public Service, to Representative Sanders of Louisiana for presentation to the committee. Colonel Frye referred to findings by the Interstate and Foreign Commerce Committee to the effect that discriminatory freight rates place the South at a disadvantage in the manufacturing and processing of raw materials, with which that section is so richly endowed, as compared with the North and eastern sections of the nation.

Frye's memorandum continued:

The cost of fuel is an important factor in any manufacturing process. We of the Southwest have at our doors a valuable fuel in the form of natural gas. The North and the East have tremendous reserves of coal; and it would seem to me that each should be accorded the inherent advantages flowing from the location of these fuels. Granting that it had the power under an amendment to the act, I do not know, of course, how the Federal Power Commission would resolve this economic question; but certainly I would prefer to see it vested with such power, to be exercised in the light of all relevant facts, than to continue under a condition in which the sole test to be applied to the solution of a great social and economic problem is the mere ability to finance a tremendously expensive natural gas line.

The gas line to which the commission refers in that part of the report from which I have quoted is the Reserve Natural Gas

## PUBLIC UTILITIES FORTNIGHTLY

Company, the estimated capital cost of which is approximately \$80,000,000. If it is worth an initial capital outlay of \$80,000,000 to New York and the contiguous areas to pipe natural gas from the Southwest, then, under a proper system of transportation economics, such as will result, we hope, from the cases now before the Interstate Commerce Commission, it should be worth equally as much to the Southwest to use this gas as a fuel in the manufacturing and conversion processes of its own raw materials. It is, I think, essential that some Federal body be clothed with power to investigate into and resolve these economic questions, and it is my judgment that that body should be the Federal Power Commission.

In saying this, I do so with full knowledge that there are two schools of thought on the subject, and I have but little doubt that those who hold to contrary views will make them known to your committee.

Colonel Frye observed that Louisiana had more than a passing interest in the

administration of the Natural Gas Act by the FPC, because of the tremendous quantities of natural gas produced and consumed within that state, much of which passes in interstate commerce.

THE Louisiana Department of Public Service was recently barred by an injunction of the statutory Federal court at New Orleans from investigating the reasonableness of rates of the interstate gas movements because of gas company contentions that (1) they were not common carriers; (2) that the interstate operations barred local jurisdiction. The Louisiana commission has since appealed to the FPC for a Federal rate investigation in the premises, which explains the Louisiana commission's desire that the FPC's jurisdiction should be established beyond a statutory doubt.

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## An Analysis of Government Business Control

IT takes a certain amount of courage, as well as research effort and organization skill, to get out a book these days on government control of business. The reason is that the picture is changing so constantly there is little guaranty that an up-to-the-minute analysis as of today will not be obsolete to some extent before it appears in print.

Even at this writing American industry, agriculture, and labor are faced with a host of new and radically different government controls in the form of proposed price legislation and priority administration. Nevertheless, this is the time which Harold D. Koontz, of the faculty of Colgate University, has selected for bringing out a volume which bears the broad and somewhat ambitious title of "Government Control of Business."

"In spite of the disturbed state of international affairs," says the author in his preface, "the present time seems to be opportune for an analysis of government control of business in the United States." Without pausing to argue this

somewhat debatable proposition, this reviewer is of the opinion that Professor Koontz has accomplished what he set out to do with noteworthy success.

The principal virtue of this book is its effective synthesis of a complicated economic pattern. Professor Koontz manages to bring between the covers of a single volume—a little more than 900 pages—a balanced picture of economic controls which the state and Federal governments have found necessary to apply in about a half-dozen different special fields of commercial enterprise, as well as to business in general.

UNDOUBTEDLY the author has hit upon a trend in literature on this subject which is already well under way, but which will become more marked in future years. Heretofore we have had books on utility regulation, books on transport regulation, books on the administration of antitrust legislation, books on agriculture and labor controls—all as if these administrative problems

## WHAT OTHERS THINK

were mutually exclusive by nature, and could be locked off into water-tight compartments for purposes of specialized study.

But the modern student of administrative control must surely recognize that the process of regulation which emerged as a common law concept with Lord Hale's ferry boat dicta is a continuing process—one which ebbs and flows with the necessities of constantly changing agricultural and economic situations. The strict regulation of rates and service to which we have grown accustomed in the field of public utilities is simply the extension of the same principles which tomorrow may have to be applied in slightly different forms to such ordinarily competitive enterprises as retail food distribution, sale of petroleum products, and marine shipping.

There is nothing new in this, as Professor Koontz notes in his first chapter on the development and evolution of the problem of business control. He does not bring out so clearly, perhaps, the fact that business regulation, like business prosperity and world history, has moved in cycles rather than in any fixed evolutionary trend. Occupations which were regulated in former times have for the past one hundred years been regarded as private business, whereas former private businesses are constantly being considered new subjects for special governmental regulation.

In the reign of Charles I in England, bakers, brewers, cab drivers, ferrymen, innkeepers, millers, tailors, victualers, and wharfingers were the subject of parliamentary regulation. Professor Wharton H. Hamilton has stated (39 *Yale Law Journal* 1089): "In Lord Hale's time—all activities comprehended under what he called business was public and all of it subject to price control."

**P**ERIODS of war activity, with their resulting restrictions on economic freedom, have always been favorable times for increasing the coverage of governmental control. During World War I statutory regulation of rents was upheld as an emergency measure here in the

United States, only to be declared invalid by the courts as a post-war policy. Now we hear talk of new rent legislation which the present progressive Supreme Court would probably uphold and which a more business-minded Supreme Court in some future year might again conceivably cast aside as unnecessary.

But to get back to Professor Koontz's book, it is obvious that in covering so many different facets of the same essential touchstone of regulation, the author of a single volume can hardly be expected to go into elaborate details. Precise scholars of public utility regulation in the United States may accordingly miss a few traditional landmark cases in Professor Koontz's discussion of the subject, which takes up 5 chapters (128 pages). However, the author does get to the meat of his subject with little or no waste motion and, as they say in baseball, apparently manages to "touch all the bases" within the reasonable limitations imposed by space requirement.

In addition to the part devoted to "Control of Public Utilities," and the introductory part on "The Problem of Control" (74 pages), the book contains a part devoted to transport regulation (198 pages), antitrust regulation (102 pages), financial regulation (85 pages), agricultural and fuel regulation (65 pages), labor regulation (126 pages), and direct government ownership and promotion of business (122 pages). There is also a good subject index and selected references following each chapter. The author's occasional footnotes are very much to the point and the references therein struck this reviewer as being possibly of more value to a reader trying to get a good background of government regulation in a short time than the somewhat broader bibliographical references following each chapter.

**W**HILE the author apparently recognizes the ebb and flow of regulation through the decades, he does not speculate very much about the underlying reasons for its appearance, disappearance, and reappearance. He mentions, for what it is worth, Professor R. G. Tug-



## PUBLIC UTILITIES FORTNIGHTLY

well's "theory of consumer disadvantage" as an interesting attempt to explain the basic nature of the public utility concept. This theory holds that when a rate of charge or a standard of service under competition would be harmful to the consumer whose only alternative to acceptance of that rate or standard would be to do without the service, price regulation becomes legally justified.

The explanation implied above (to the effect that regulation is but a symptom of a period of intense economic pressure and business strain) is not suggested by the author. Yet it is a fair question to ask whether economic doctrines and ideologies are the cause, or the effect, of factual trends and circumstances of a

given period. To those who hold that Adam Smith was but the product rather than the prophet of the beginning of one of the world's eras of intense economic expansion, the connection between the drifting tides of regulation and shifting events of political history and business opportunities is an association which cannot be lightly dismissed. Much of the evidence for this and other interesting speculations in the multilateral field of business control is to be found in Professor Koontz's excellent and authoritative volume.

—F. X. W.

GOVERNMENT CONTROL OF BUSINESS. By Harold D. Koontz. Houghton Mifflin Company, 2 Park Street, Boston, Mass. Price \$4.50. 936 pp. 1941.

## Is the Southeast Power Shortage Here to Stay?

FEDERAL government power officials have been taking a generally pessimistic view of certain local power shortage situations, especially in the Southeast. The question has naturally arisen, how much of this has been brought on by the abnormal lack of rainfall during the past winter and spring? How much has been due to increased demand for defense production?

Local utilities, including the TVA, seem inclined to blame the drought. The FPC apparently has other ideas. At any rate, it recently ordered interconnections between utilities in southern states as a defense emergency measure and then requested the TVA and the Cincinnati Gas & Electric Company to consider tying in their facilities with a heavy transmission line.

George B. Bryant, Jr., staff correspondent of *The Wall Street Journal*, has been writing a series of articles in that publication dealing with the power shortage situation, especially in the Southeast. Some of Mr. Bryant's observations are quite thought provoking. In addition to the recent FPC orders for the connections in the Southeast, which will tap

AUG. 14, 1941

generating resources from Florida to Illinois and from Texas to Virginia, there is a possibility in the future that even the Northeast might be tied into the Southeast pool so that power from New York, Pennsylvania, or Maryland might be shifted by relay to add to the supply in Tennessee.

Whether this will be attempted in the near future, says Mr. Bryant, will depend in large measure on the steps announced to meet the southeastern situation, the availability of steel and copper to make such connection, and the question of whether much additional aluminum and magnesium capacity will be concentrated in the Southeast.

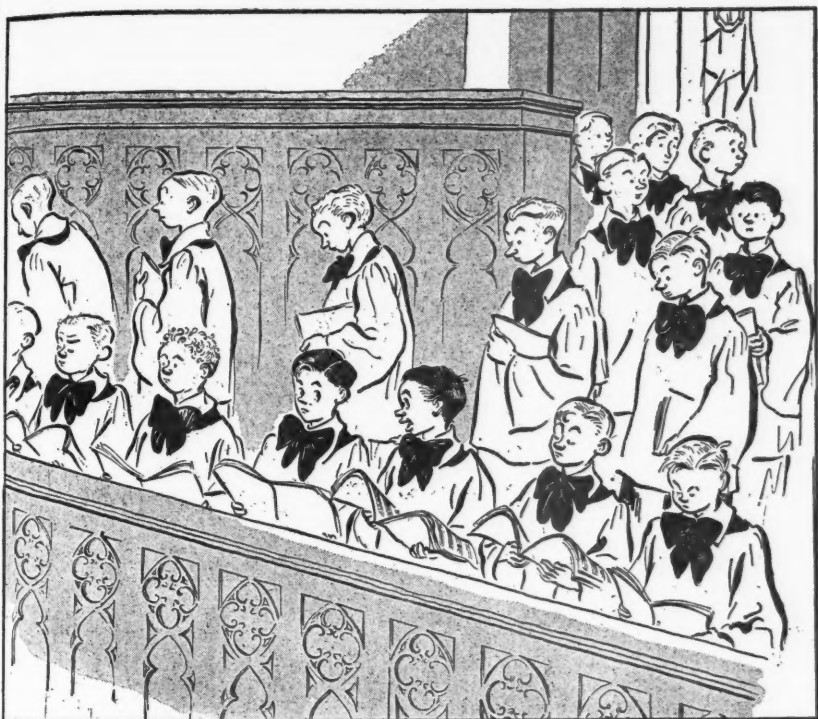
RESPECTING the difference of opinion as to the responsibility of the drought for the recent scarcity of power in the Southeast, Mr. Bryant stated in the sixth instalment of his *Wall Street Journal* series:

The Tennessee Valley Authority attributes the full amount of the power shortage in its area to the drought.

Officials say that if there had been normal rainfall over this section of the Southeast during the winter, spring, and summer



## WHAT OTHERS THINK



Courtesy, *The New Yorker*

### "I HEAR THERE'S A TALENT SCOUT FROM WESTERN UNION OUT FRONT"

months the TVA would have been in a position not only to meet all of its own commitments, but would have had enough power left over to round out the requirements of the Aluminum Company of America Alcoa plant, which is the biggest defense user in the area. In so far as their own territory is concerned, these officials do not concur in the Federal Power Commission view that the drought merely brought a shortage situation to a head several months before it would have occurred anyhow. With normal rainfall, they say, TVA would have been able to take care of its own region during the fall when water levels drop.

However, as the situation stands today, the authority's experts estimate that for the next four months the power needs of defense industries in the Tennessee Valley area will exceed the available capacity by some 400,000,000 kilowatt hours.

The TVA plans to cover this deficit (1) by a 150,000,000 kilowatt hours' reduction in nondefense consumption and (2) by importing 250,000,000 kilowatt hours from utilities in adjacent areas. Unless the short-

age has been cured by late October by better than usual rains and the bringing in of additional capacity now under construction, this program will have to be continued.

TVA's experts scoff at the idea that too much reliance has been placed on water power in the Tennessee valley; that the TVA's system is out of balance and needs more steam installations to give it more stability and guard against a shortage in times of drought.

They say the TVA has been able at all times this year to meet its firm power commitments from the output of its own generating facilities. The conservation program and the imported power, they insist, is necessary only in order that power not covered by firm contracts can be delivered to the defense industries, especially the Aluminum Company, which have been operating at capacity levels the year round.

For example, it was explained the Aluminum Company has had a firm power contract with TVA for 30,000

## PUBLIC UTILITIES FORTNIGHTLY

kilowatts and had available from its own hydro plant 70,000 kilowatts of firm power. It relies upon secondary and dump power available both from its own plant and from the TVA on a seasonal or wet weather basis for much of its energy. Now, the Aluminum Company needs 250,000 kilowatts of what amounts to firm power the year round and no capacity has been provided to meet this demand.

**D**URING the twelve months ended June 30th, they point out, the Aluminum Company used 2,190,000,000 kilowatt hours. Of this amount, the TVA supplied 250,000,000 kilowatt hours under its firm contract, supplied 786,000,000 kilowatt hours in excess of the firm contract, and brought in 124,000,000 kilowatt hours from other utilities. The Aluminum Company used around 1,017,000,000 kilowatt hours from its own plant.

At present, the TVA system has an installed capacity of 1,057,000 kilowatts, 837,000 kilowatts at hydro plant, and 220,000 kilowatts at steam plants. Of the total installed capacity, TVA places the continuous capacity at 661,000 kilowatts. The dependable peak for the system is placed at 897,000 kilowatts.

Additions under construction will lift the installed capacity during the next few years to the following levels: 1,115,800 kilowatts by the end of 1941; 1,563,000 by the end of 1942; 1,659,000 by the end of 1943; and 1,785,000 by the end of 1944. These additions include 180,000 kilowatts of steam plant capacity, of which 60,000 kilowatts will be brought in this year and the remaining 120,000 kilowatts will be brought in next year. This is an increase of more than 80 per cent in the present steam capacity, but it will leave the system still dependent upon water for the great bulk of its power.

In addition to the expansion program now under way, Congress recently approved a \$40,000,000 appropriation to the TVA (see July 31st issue, page 178) for the construction of four more dams, two of which would be storage reser-

voirs. These developments would add about 210,000 kilowatts of installed capacity and would bring the total installed capacity of the system to about 1,770,000 kilowatts in 1942. The idea is that these projects would be completed in eighteen months.

**F**AIRLY generous rains during June and early July relieved the situation somewhat, especially in Georgia, where the Georgia Power Company was able to pick up some water in its depleted reservoirs, and the Atlanta business district was able to end the brief spell of black-outs on display windows and advertising signs. Indeed, the chairman of the Georgia Public Service Commission, Walter McDonald, seems to feel that the FPC's action in declaring the power emergency was precipitate and uncalled for. Chairman McDonald stated:

The FPC declaration was designed to hurt the South by showing that we haven't the power to do the things we want to do; namely, secure more defense industries.

The Georgia commissioner, who has been active in the Southern Governors' Conference campaign for more Dixie industries, accused the FPC of "scaring" business away from the South.

Furthermore, it must not be overlooked that our defense program has doubled and tripled in some phases, almost within a single year. While we must assume that this rapid increase in defense requirements is absolutely essential in the national defense, it is unfair to expect accurate forecasts from industrial consultants who are experienced only in dealing with facts and figures and not with crystal balls. Thus, only a little more than a year ago Congress suddenly decided in favor of a 2-ocean Navy. This meant flooding the shipyards and turbine factories with priority orders, upsetting all the normal shipping and heavy electrical equipment estimates.

Clearly, no private industrial official could be fairly held to a foreknowledge of any such sharp shift in our traditional policy. But because it takes quite a few

## WHAT OTHERS THINK

months to build ships and turbines, ordinary orders for civilian needs, normally planned well in advance, have to be side-tracked for defense priorities.

William L. Batt, OPM director of production, put the matter fairly in a recent address before the Institute of Public Affairs at the University of Virginia in Charlottesville, Virginia. He said in part:

Let us consider the aluminum situation, since it is the most pressing and the most dramatic which comes to mind, and also because it illustrates many of the problems which are common to domestic expansion of materials output.

When we came down here last summer there appeared to us to be a sufficient capacity of aluminum either in existence or under construction for any needs which might develop, and aluminum suppliers and consumers generally shared that opinion. We had estimated first that 800,000,000 pounds of aluminum a year would suffice both for the needs of defense and for ordinary civilian requirements—which capacity was reasonably within sight—but it was not long before that figure had to be raised to 1,200,000,000. That meant a further heavy expansion of the aluminum industry, and

plans had to be made to get that expansion under way.

But when the new heavy bomber program was recently announced, that necessitated another revision of calculations, and the defense program is now aiming at a capacity of 1,600,000,000 pounds of aluminum a year—roughly twice what we had anticipated a year ago.

THE recent order of the OPACS in granting all utility services a preference following defense needs in strategic metals for the repair and maintenance of established service should help the situation somewhat from the utility standpoint. But by the same token this order probably means that obtaining scarce materials for the extension of service to new customers will be placed pretty far down the line—perhaps about as far down as the B7 rating which the OPM gave utilities in its aluminum priority order. That B7 rating was very far down indeed. It was just one step above the aluminum pot and pan industry which is now out of business on an aluminum basis, having to shift to substitutes.

## Notes on Recent Publications

THE PICKWICK LANDING PROJECT. Technical Report No. 3. Superintendent of Documents, Washington, D. C. Price \$1. 1941.

RESULTS OF MUNICIPAL ELECTRIC SYSTEMS. Seventh Edition. Published by Burns & McDonnell Engineering Company, Kansas City, Mo. 1941. Price \$5. 428 pp.

Under this title the consulting engineering firm of Burns & McDonnell, of Kansas City, Missouri, have just published their seventh edition (1941) of an electric rate book showing the operating records of earnings, output, rates, revenues, valuation, and other information as to the use and cost of electricity in 758 municipally owned systems.

The volume of 428 pages is accompanied by interesting graphs and tables showing the rates and revenues, also facts pertaining to the increasing use of electricity and the decreasing cost of electricity in municipal installations.

City officials, operators, and managers of both private and municipal systems will find these operating records of much interest and value. Over half the systems in the country have lowered rates since the former 1939 edition. The bonded indebtedness of munic-

ipal systems is noted where such information has been reported. The type of plant and its management are recorded.

Every complete and authentic record received from municipal systems has been recorded. This would appear to make the volume an unbiased cross section of what municipally owned systems are doing in the producing and selling of electricity from steam, Diesel, and hydro plants. It is the only book of the kind published, and as a reference is of considerable value to those whose duties require them to investigate periodically the rapidly changing power rates and conditions.

SELLING THE MODERN GAS RANGE. Special supplement of the National Retail Dry Goods Association Bulletin. Edited by James R. Abrams. Association of Gas Appliance and Equipment Manufacturers, 60 East 42nd Street, New York, N. Y. April, 1941.

SURVEY ON GAS APPLIANCE SALES IN 13 CITIES. Association of Gas Appliance and Equipment Manufacturers, 60 East 42nd Street, New York, N. Y. April, 1941.



## The March of Events

### FPC Power Expansion Plan

**A** DEFENSE power expansion program involving the expenditure of up to \$470,000,000 annually for the duration of the emergency would be started immediately, Leland Olds, chairman of the Federal Power Commission, said last month after conferring with President Roosevelt on the power situation.

The program, involving the booking of the full capacity of electrical generator plants for the emergency period, was predicated upon estimates that when defense expenditures in 1943 are running at the rate of \$3,000,000,000 per month, or an annual rate of \$36,000,000,000, the defense power load will be about 20,000,000 kilowatts, which is about four times the present estimated defense load.

The plans provide for immediate contracting for capacity output of all generator-building companies in the United States, at a cost estimated to run from \$150,000,000 to \$200,000,000 a year; an investment in steam stations, not including generators, estimated at from \$75,000,000 to \$100,000,000 a year; investment of about \$170,000,000 annually for additional hydroelectric projects, not including generator costs; creation of a Reconstruction Finance Corporation subsidiary to provide funds for the purchase of all generator-building capacity not booked by private or municipal power companies; and "a series of river basin projects calling for installation of approximately 1,000,000 kilowatts a year" to be constructed by the Corps of Engineers, the Bureau of Reclamation, and regional power authorities.

The FPC recommended that Army Engineers immediately construct a power dam at Enfield, Connecticut, as a unit in the nation-wide chain of hydroelectric projects to assure adequate power for the defense program in 1943, 1944, 1945, and 1946. Legislation authorizing construction of the dam was awaiting House action. The FPC told the President the installed capacity of the Enfield unit would be 30,000 kilowatts. The commission recommended for inclusion in its national chain Enfield and the following four other Connecticut basin installations:

Knightville, Mass., 5,000 kilowatts; Newfane, Vt., 40,000 kilowatts; Upper 15 Miles Falls, N. H., 70,000 kilowatts; and Victory, Vt., storage reservoir. The commission estimated the Enfield dam could be completed in 1943 and the other four not later than 1946.

A plan to greatly expand the electric power

facilities in South Carolina and North Carolina was also proposed by the FPC. New steam and hydro plants were proposed. Under this plan, the enlargement of existing generating facilities was asked, to an extent that an additional 4,000,000,000 kilowatt hours of energy would be produced annually. The Par Shoals plant, in Fairfield county, owned by the South Carolina Electric & Gas Company, of Columbia, would be enlarged. At Charleston, under the plan, another steam plant for the generation of energy would be constructed by the South Carolina Power Company.

Yet another large steam plant for Raleigh, North Carolina, was also proposed, to be constructed by the Carolina Power & Light Company, 20 per cent of the business of which is in eastern South Carolina. Also, the Tiger steam plant of the Duke Power Company in Greenville county would be enlarged.

The proposed program of the FPC would be considered an invasion of state's rights by many state public utility regulatory authorities. This opinion was expressed in replies to a telegraphic survey made by *The Wall Street Journal* of 45 state utility commissions. Some of the replies expressed no opinion, and another refused comment because of the national emergency. Others spoke of a threat to state jurisdiction, and expressed disapproval or doubt as to the wisdom of such action.

Secretary of the Interior Ickes declared he would pay no attention to the defense power recommendations of the FPC, because, he said, they were "very carelessly prepared."

### Seaway a Danger

**J**OHAN L. Lewis, president of the United Mine Workers of America, on July 28th expressed the united opposition of his organization to the St. Lawrence waterway project, asserting that it was economically unjustified and in time would displace at least 50,000 American working men. Testifying before the House Rivers and Harbors Committee, Mr. Lewis said:

"It is common gossip in the congressional halls, and admitted in editorial comment, that the proposed St. Lawrence project would be kicked out of the window without ceremony if a sane appraisal and simple economic yardstick could be utilized to determine its merits.

"Rejected in 1934 as being totally unnecessary for either power or commerce, it is here again under a new dress, patriotism, war-time

## THE MARCH OF EVENTS

defense. It is being propelled by all the adjectives known to the seasoned campaigner, plus all of the war-time facilities of an over-recruited, high-power publicity staff.

"The new dress of defense necessity is calculated to lift the proposal from the mire of the monstrous and uneconomic and make those who know better accept it as an essential arm of national defense."

He asserted that completion of the project would result in the displacement of coal in the generation of electricity, would provide a water route, and would serve as an inducement for the importation of foreign goods and coal.

Mr. Lewis said the waterway not only would increase unemployment of miners but would open up "a vast area to economic invasion by foreign countries—sending low-cost goods in foreign ships" into the heart of the United States.

Mr. Lewis said Canada, "which has not yet compulsory military service or tax rates as heavy as ours," would have a low-cost waterway for low-priced foreign goods. Canada would get the waterway "whether she contributes a dollar or a postage stamp," he said.

### Would Sell Bonds to RFC

**I**N order to meet defense power requirements, two subsidiaries of the Commonwealth & Southern Corporation recently asked SEC permission to issue and sell to the Reconstruction Finance Corporation \$6,820,000 of bonds to finance additions to electric plant.

The RFC funds, which would take the form of first mortgage 4 per cent bonds, would be used for the construction of two new 20,000 kilowatt generators for the Mississippi Power Company and the Gulf Power Company.

The Mississippi Power Company asked authority to issue and sell to RFC \$3,250,000 of 4 per cent first and refunding mortgage gold bonds due 1951.

### SEC Prohibits Loans

**T**HE Securities and Exchange Commission on July 23rd announced the adoption of an amendment to Rule U-45 under the Holding Company Act which prohibits the making of loans, extensions of credit, donations, and capital contributions to associate companies, except in accordance with a declaration which has become effective under the act.

The amendment exempts from Rule U-45 a loan or an extension of credit or an agreement for indemnity arising out of joint tax return filed by a holding company and its subsidiaries. The rule became effective on July 23rd.

### Daylight Saving in South

**A**LABAMA and Tennessee official clocks were moved forward an hour on July 21st to

bring those states under central daylight saving time by proclamation of their governors.

Governor Dixon of Alabama proclaimed daylight saving time on July 16th for all state agencies, and called upon city and county governments to install it within their jurisdiction.

Mississippi clocks would be advanced an hour on July 31st and those in North and South Carolina on August 1st to bring those states under daylight saving time to aid national defense, as requested by President Roosevelt as a means of conserving electric energy.

The governors of Georgia, Florida, and Louisiana declined to proclaim daylight saving, while in another state, Virginia, no action was taken on the original request that eight states go on daylight saving immediately because of power shortages which might affect national defense industries.

Governor Price of Virginia said he was considering calling for voluntary observance. Governor Spessard L. Holland of Florida joined with Governor Eugene Talmadge of Georgia in declining to issue an executive order calling for daylight saving time. Governor Holland said that Florida's electric power plants are producing much under their capacity, and that he would have to be sure "that the losses sustained will be adequately offset by contributions effectively made to national defense before I issue an executive order so vitally affecting the economic life of our people and our state."

Governor Talmadge of Georgia on July 28th turned down a personal request from President Roosevelt for establishment of daylight time in the eastern half of Georgia as a defense measure. The governor had previously declined to join other southeastern states, excepting Florida, in putting the entire state on daylight time, explaining that clocks had already been moved up one hour in western Georgia as a result of a bill passed by the state legislature. That measure put all of the state on eastern time.

In his reply to President Roosevelt, Governor Talmadge said that he would not comply with the time-change appeal because it would cause "too much confusion." Moreover, he told the President that he doubted if the people of Georgia would respond even if he, the governor, issued an executive order for the time shift.

### OPM Sets Up Power Unit

**T**HE Office of Production Management created a special power unit on July 21st to handle all defense power problems, called on private and public power interests to forget past conflicts and fears of the future, and announced plans for three big power pools in the Southeast, Arkansas, and the New England-New York areas to provide energy for new aluminum plants.

J. A. Krug, power manager for the Ten-



## PUBLIC UTILITIES FORTNIGHTLY

nessee Valley Authority, was named to head the new unit. Some officials asserted that the agency was set up to head off what they said was a desire of Secretary Ickes to be "energy coordinator," with full powers over the oil, coal, and electric power industries and their relation to defense.

William S. Knudsen and Sidney Hillman, co-directors of the OPM, emphasized in a statement that the establishment of the new organization and the appointment of Mr. Krug provided a method of handling "all defense power problems through a single clearing office." They said the OPM "has assumed full responsibility for an adequate power supply."

Mr. Krug said at a press conference that plans had been made to provide 1,000,000 kilowatts needed for the expanding aluminum and magnesium production and praised the co-operation of private, public, and Federal power interests which had made this achievement possible.

### GRDA Reorganization Suggested

**R**EOrganization of the Grand River Dam Authority was urged last month by Representative Ellis, Democrat of Arkansas. In letters to John M. Carmody, administrator of the Federal Works Agency, and Colonel M. E. Gilmore, commissioner of public works, Mr. Ellis declared:

"I am convinced, as I believe you will be convinced, that the present administration of the Grand River Dam Authority, in its determination to play into the hands of certain private power companies in their determination to wreck KAMO transmission coöperative and REA coöperatives in Kansas, Arkansas, Missouri, and Oklahoma, is wrecking the Grand River Dam Authority, is betraying its

trust as intended by the authority and by the Federal government, and is stifling the national defense program."

### Securities Laws

**T**HE House Interstate Commerce Committee was reported anxious to start hearings on proposed amendments to the securities laws and wants to complete a bill this year revising securities legislation. These views were expressed by Committee Chairman Clarence F. Lea, Democrat of California, in an exchange of correspondence with the Securities and Exchange Commission Chairman Edward C. Eicher, recently made public by the SEC.

Mr. Lea indicated some impatience over delay by the SEC and representatives of investment bankers, securities dealers, and stock exchanges in submitting to Congress their recommendations for changes in the securities acts. The SEC and the industry groups have been holding conferences for over a year with a view to formulating a program of securities law restrictions.

Chairman Lea's views were expressed in response to a letter from Mr. Eicher, in which the SEC chairman said that SEC-industry recommendations had been unavoidably delayed by a request from groups representing issuers of securities that they be given opportunity to study the SEC-industry proposals and make suggestions.

Mr. Eicher said that although the SEC and industry groups had about reached a "complete understanding" as to their respective positions, the SEC felt that the securities issuers should be given a chance to consider the proposed changes in the laws. Consequently, he said, the drafts of the SEC and industry proposals had been given to the National Association of Manufacturers and the Controllers Institute of America for study and suggestions.

## California

### Electric Rates Slashed

**A**s a result of recently revised Boulder Canyon project legislation and the signing of power contracts by the United States and the department of water and power, the Los Angeles Board of Water and Power Commissioners last month adopted resolutions lowering the municipal system's electric rate schedules by \$980,000.

Added to the \$1,044,000 reduction previously authorized by the board and then pending in the city council, the total savings to consumers will amount to \$2,024,000 a year.

Savings to the various classes of users under the combined rate reductions which, it was pre-

sumed, would be acted upon by the city council simultaneously, are: residential, \$418,000; general lighting, \$938,000; general power, \$466,000; street lighting, \$157,000.

### Phone Hearing Denied

**T**HE state supreme court on July 24th denied a hearing to the Southern California Telephone Company in its appeal from a Los Angeles court ruling approving its 1935-36 tax bill of \$1,400,000, and upholding the new method of taxing utilities adopted in 1933.

The telephone company challenged constitutionality of the 1933 constitutional amendment, which ordered assessment of utility



## THE MARCH OF EVENTS

properties on an actual value basis, in substitution for the former gross receipts tax. The amendment became effective in 1935.

The company contended that under the new method it had paid the city of Los Angeles

\$398,756 too much for 1935-36, and the county \$909,039 more than it should have paid.

The telephone company sought refunds, but the Los Angeles court granted a nonsuit to the city and county.

## Colorado

### Public Ownership Boosted

**G**EORGE E. Saunders, former secretary of state and 1940 Democratic candidate for governor, and four other men, two of them officials of the Colorado Annuity League, filed incorporation papers with the secretary of state last month for creation of Taxpayers Gas & Electric Users, Inc., an organization to promote public ownership and operation of power, light, and gas utilities in the state of Colorado.

The incorporators of the new agency, which is designed as nonprofit, include, besides Saunders, C. E. Bloedorn and Oliver T. McIntosh of Denver, both connected with the Colorado Annuity League; Edward H. Barton, also of Denver; and Thomas Gray of Fort Collins, former employee of the Public Service Company of Colorado.

The incorporators declare that their sole objectives will be to promote in any community of the state municipal or public ownership of power, light, and gas utilities.

## Florida

### Electric Rate Study

**M**IAAMI city commissioners laid the groundwork last month for study of rates charged by the Florida Power & Light Company, already ordered to show cause September 12th why its charges should not be reduced.

The commission instructed City Manager L. L. Lee to invite estimates by engineering firms as to what they would charge the city to appraise the Florida Power & Light equipment used in serving Miami consumers. Such investment is the basis for rate making.

Commissioner R. C. Gardner brought in a resolution restricting the city manager to the

Kansas City firm of Burns & McDonnell, but Commissioner I. D. MacVicar secured his assent to broadening the field to all such qualified firms.

The commission, at an informal session, agreed to hear what McGregor Smith, president of the Florida Power & Light, might want to say on the company's behalf before September 12th. Smith, asking for a round-table discussion of what he characterized as the company's "problems," declared his fifteen years as a utility executive had been free of "rate fights," and that he did not expect to get into one now.

Smith said he thought an amicable adjustment could be worked out.

## Illinois

### FPC Applies Prudent Investment Theory

**I**N a precedent-shattering decision terminating a 3-year investigation, the Federal Power Commission last month applied the prudent investment theory as a basis for rate making, by ordering the Chicago District Electric Generating Corporation to cut its rates to the Commonwealth Edison Company of Chicago by \$521,978 annually through reducing the corporation's rate base to \$34,355,469 and establishing the corporation's rate of return at 5½ per cent. The entire output of the corporation's generating plant is sold to Commonwealth Edison Company and Northern In-

diana Public Service Company, who supply consumers in the Chicago and northern Indiana area.

Section 208(a) of the Federal Power Act provides that the commission may investigate and ascertain the actual legitimate cost of the property of every public utility, the depreciation therein, and, when found necessary for rate-making purposes, other facts which bear on the determination of such cost or depreciation, and the fair value of such property.

The opinion pointed out that this section of the act authorizes the commission, for rate-making purposes, to determine in the first instance the actual legitimate cost of the utility properties and the depreciation therein.

During the investigation the corporation

## PUBLIC UTILITIES FORTNIGHTLY

voluntarily decreased its allowances for fixed charges by one per cent, which lowered rates approximately \$420,000 a year. The reduction ordered by the commission plus the voluntary reduction made during the investigation totals \$941,978 and with resulting tax saving, the total reduction in rates will well exceed \$1,000,000.

### Entice Firms' Return

COUNTY Assessor John S. Clark announced recently that he would attempt to lure back to Chicago a dozen utility holding companies which moved their offices to other states within the last few years to avoid high personal property taxes.

Members of the assessor's staff, Clark said, have been assigned to confer with the holding companies' officials and outline a recently instituted plan for reducing the taxes substantially below the old levels. The work will be

carried out under John E. Battle, chief of the assessor's personal property section.

Clark recalled that the Standard Gas & Electric Company, a billion dollar holding corporation which moved its offices to New York in 1939 to avoid Chicago taxes, returned May 1st. Clark said the argument for enticing Standard Gas to return, one that will be used in the case of the other companies, is that recent legislation and court decisions have changed the personal property assessment basis and resulted in reduced taxes.

### Permit Use of Natural Gas

THE state commerce commission on July 23rd authorized the Union Electric Company of Illinois to substitute natural gas for its present mixed gas service in and near Alton and to reduce by 14.66 per cent its rate to domestic gas users and lower rates to commercial users approximately 29.3 per cent.

## Kentucky

### Power Grid to Serve Co-ops

CONSTRUCTION of a \$2,500,000 electric power generating and transmission system to serve the rural electrification coöperatives in eastern Kentucky will begin this year, J. V. Swain said recently.

Superintendent of the REA coöperative at Danville and newly elected president of the state-chartered East Kentucky Rural Electric Coöperative Association, Swain said 73 counties would receive electricity generated by the plant.

The location had not been selected but it probably would be in central Kentucky, likely on the Kentucky river, he said. The corporation's main office will be in Danville.

The system, Swain added, is planned to insure sufficient power for coöperatives whose power supply might be threatened because of the defense emergency, and to guarantee the coöperatives long-time service at "satisfactory" rates.

All 13 coöperatives in the eastern part of Kentucky would be connected to the power plant, he said, adding that the plant would cost approximately \$1,500,000 and new lines for carrying the power would cost between \$1,000,000 and \$1,500,000.

Money for the construction is to be obtained through an allotment from the Federal Rural Electrification Administration, Swain asserted, and the project is to be self-liquidating, repaying the Federal funds in twenty years.

## Michigan

### Gas Rate Hearing Recessed

AN attempt to obtain a reduction in natural gas rates paid by half a million consumers in Wayne county, which includes Detroit, was interrupted when a hearing before the Federal Power Commission examiners at Washington was recessed until September

2nd. The recess was asked by Carl Wheat, attorney for the Panhandle Eastern Pipeline Company of Kansas City, Missouri, which provides the gas distributed in Wayne county through facilities of the Michigan Consolidated Gas Company of Detroit. He said preparation of his company's case would require that much time.

## Mississippi

### Resume Voluntary Blackout

THE voluntary curtailment program for the conservation of electric power which was AUG. 14, 1941

initiated May 26th by customers of the Mississippi Power Company was resumed at 6 a. m. on July 21st after two weeks' relaxation, it was announced by power company officials at

## THE MARCH OF EVENTS

Gulfport recently. The present blackout period was said to be no less necessary and serious than before.

In letters mailed to industrial and commercial customers last month outlining the present situation, L. P. Sweatt, vice president and general manager of the power company, pointed out that "power requirements for national defense are continuing to increase at

a rapid rate and must be provided for. The conservation program is demanding every available kilowatt hour."

Experience has shown that the needed curtailment of commercial users can in most instances be achieved with a total blackout for the full night period but under the schedule windows and signs may be lighted from 1 p. m. to 8:30 p. m., Mr. Sweatt said.

## Nebraska

### Power Units Linked

A NEW high-power transmission line connecting the Kansas Gas & Electric Company system at Wichita, Kansas, with that of the Nebraska Power Company of Omaha was authorized on July 21st by the Nebraska State Railway Commission. Nebraska Power will build the \$4,000,000 line stretching 270 miles and will thereby obviate the need of additional generating capacity, it was said.

Both companies are subsidiaries of Ameri-

can Power & Light Company in the Electric Bond and Share system. Construction of the new power line would start immediately, according to officials, who said that the work should be completed by January 1, 1942.

Nebraska's three public hydroelectric projects, originally opposed to the interconnection, withdrew their objections. Roy Page, general manager and vice president of the Nebraska Power Company, assured hydro officials that the new line would not affect the company's contract with the districts.

## New Jersey

### Governor Wins Rail Tax Fight

THE \$52,000,000 railroad tax battle fought for several weeks between Governor Charles Edison, Democrat, and Mayor Frank Hague of Jersey City, state leader of the Democratic party, was won in the state legislature on July 22nd by Mr. Edison, whose victory precipitated a bitter verbal clash between the two men.

After an all-night session, the railroad tax compromise bills endorsed by Governor Edison and fought by Mayor Hague in a state-

wide advertising campaign, were passed in the assembly by 33 votes to 22. They were passed in the senate by 12 to 3. Both houses are Republican-controlled. Three Democrats voted for the bills in the assembly and two in the senate.

The compromise revises the method of levying railroad taxes by taking earnings into consideration. It calls for payment in full of \$34,000,000 in delinquent taxes, but cancels \$18,000,000 in interest and penalties. Constitutionality of the measures might be tested in the courts.

## New York

### Hotel Phone Rates Sustained

THE appellate division of the New York Supreme Court has sustained a decision of Trial Judge Francis Bergan, upholding a New York Public Service Commission order affecting phone rates for hotel service. The commission in 1938 had prescribed surcharges which may be imposed for telephone service in hotels. In general, these surcharges were limited to 5 cents for outside calls and for toll messages not exceeding 50 cents, and to 10 cents for toll messages exceeding 50 cents.

Following the commission's order the New York Telephone Company filed tariffs making

effective the surcharges prescribed by the commission. Certain hotels denied the power of the commission to make the order and refused to comply; whereupon the commission brought suit in the New York Supreme Court, Albany county, to force compliance.

Trial Judge Bergan, in directing the hotel companies to comply with the commission's order, conceded that hotels are not public utilities in the usual sense. To the extent that hotels do, however, sell public telephone service to their guests they are engaged in a public business subject to regulation under the Public Service Laws of the state of New York.

Upholding this decision the appellate divi-

## PUBLIC UTILITIES FORTNIGHTLY

sion said that it is immaterial whether the hotels make a loss or profit since the issue of "confiscation" is pertinent only where there is destruction or impairment of a property right. A hotel acquires no property right in a utility service which it is not required by law to furnish.

In other words, New York hotels are at liberty to dispense with telephone service to their guests entirely if they are not satisfied with the monetary return therefrom. But where they undertake to furnish such service they must do so in compliance with the rules and regulations laid down by the regulatory authority of the state.

### Management Hit

THE state public service commission, in ordering the International Railway Company of Buffalo to cancel its contract with Mitten Management, Inc., Philadelphia, on July 28th said that the latter company had brought International "to the verge of bankruptcy."

In a 107-page interim report based on 11 hearings covering operations of Mitten management under the contract, Commissioner Maurice C. Burritt said the Philadelphia concern's financial record was "discreditable." The contract, in force since January 1, 1939, is "unnecessary for proper management" of the

Buffalo company, he added. He described the condition of much of the rail property as "very bad" and said an investigation into the company's finances, service, equipment, and accounts was now under way.

### Federal Coöperation Seen

FORMATION of four electric corporations last month to operate in rural districts has given rise to speculation that in coöperation with the Federal administration these corporations are preparing to furnish electricity in outlying sections, to aid consumers to have premises wired and to install fixtures and machinery.

It is understood that Federal employees have been active in various rural sections of late, inducing prospective consumers to agree to take electricity if it could be brought near them. The corporations, it was believed, were the result of such activity.

Certificates of incorporation have been issued to the Otsego Electric Association of Cooperstown, the Steuben Electric Association of Bath, the Delaware County Electric Association of Delhi, and the Oneida County Electric Association of New Hartford. Each corporation is authorized by its charter to generate or buy and transmit electricity. Before this may be done the corporation must have the consent of the state commission.

## Ohio

### Rate Case Remanded

THE state supreme court, holding that the Ohio Fuel Gas Company did not have the right to include the cost of mixing inert gas with natural gas in arriving at a city rate, remanded the Columbus gas rate case to the state public utilities commission on July 23rd with instructions to fix a new rate without allowing the utility to charge the cost of the stabilizing process.

Whether the decision would mean any appreciable reduction in the 56.22-cent rate set

by the state commission remained to be seen, however, inasmuch as the gas company contended that the stabilizing charge for the city amounted to only \$5,200 a year. Elimination of this charge, C. I. Weaver, president of the gas company, declared in a statement, would mean a reduction in the 56.22 rate of only one-tenth of a cent per thousand cubic feet.

The statement pointed out that the supreme court decision supported the utilities commission in setting aside the 48-cent rate as inadequate, and that the company would not appeal the decision.

## South Carolina

### Utility Answers Suit

THE South Carolina Electric & Gas Company on July 22nd filed an answer in the United States District Court to a suit of \$1,000,000 filed against it recently by the state of South Carolina, ex rel Burnet R. Maybank, as governor; the budget commission; and the contingent fund committee.

The answer contended that the Federal court

was without jurisdiction over the subject matter of the suit and alleged that the complaint failed to state a claim upon which relief could be granted.

It was also contended that the attorneys bringing the suit were without authority to bring suit in the name of the state of South Carolina as it was done without the written consent of the attorney general in violation of the appropriation act of South Carolina.

AUG. 14, 1941

## THE MARCH OF EVENTS

Plaintiffs in the suit have alleged that the defendant had failed to carry out obligations

incurred by it and its predecessors in acquiring the Columbia canal.

### Tennessee

#### TVA Power Pacts OK'd

THE Knoxville Utilities Board recently approved two contracts with TVA relating to the power conservation program. One provides for the board to be reimbursed to the extent of \$5,000 for its efforts in obtaining cooperation of its consumers in saving power, a 25 per cent reduction being set as the objective and the time of the program July 1st through December 31st.

The other contract was an agreement whereby TVA agreed to reimburse the city for

power obtained through hook-ups with private generating plants. Under the terms, TVA is to be billed  $1\frac{1}{2}$  cents per kilowatt hour. The board will pay a maximum of  $1\frac{1}{2}$  cents, the  $\frac{1}{2}$ -cent difference representing the cost of installations and servicing.

However, provision was made that the city cannot make a profit from the sale of power to TVA, as TVA is to be reimbursed if the full cost is less than  $1\frac{1}{2}$  cents. At the same time, TVA agreed to pay the city should the installations and servicing exceed the  $1\frac{1}{2}$ -cent mark.

### Utah

#### Will Build Power Plant

THE Utah Copper Company will build a \$5,000,000 plant at Garfield to generate its own electric power, D. D. Moffat, vice president and general manager, announced last month. Design for the plant is being drawn and construction is expected to begin at an early date, with a view to insuring completion and start of operation late in the spring of 1943, he said.

The copper company's present contract with the Utah Power & Light Company expires about the middle of 1943, George M. Gadsby,

president and general manager of the power company, said.

Present plans for the power plant, which will use steam generation, call for an installed capacity of 75,000 kilowatts, Mr. Moffat said. The company contemplates the use of Utah coal.

Mr. Gadsby declared the addition of the electric energy from the new plant will be welcomed, as it will enable the power company to apply the sizeable amount of power now going to the copper firm toward meeting the rapidly increasing requirements in the Salt Lake area.

### Virginia

#### Coöperative Takes Holdings

THE Prince William Electric Coöperative on July 16th officially took over the holdings of the Bull Run Power Company, negotiations for which were begun several months ago. H. B. Lee, manager, announced that a \$325,000 loan, approved last month by the state

corporation commission, had been granted by the Rural Electrification Administration to the new coöperative. Lee said that \$80,000 of the amount would be used to purchase the assets of the Bull Run Power Company which were not already covered by REA financing; \$9,000 would go to the stockholders; and the balance to rehabilitating and expanding the system.

### Wisconsin

#### Utilities Merged

COMMON ownership of the Wisconsin Electric Power Company, the Wisconsin Gas & Electric Company, and the Wisconsin-Michigan Power Company, one of the largest utility mergers in Wisconsin's history, was authorized by the state commission last month.

Wisconsin Electric Power was authorized to issue \$12,650,000 of common stock to acquire common shares of the other two utilities. All three concerns are subsidiaries of The North American Company, which owns all of their common stock with the exception of about 12 per cent of Wisconsin Electric Power stock which is privately owned.



# The Latest Utility Rulings

## Rule Limiting Liability for Errors in Telephone Directory Upheld

A PETITION by a telephone subscriber for modification of rules of a telephone company limiting liability for errors in directories was dismissed by the Massachusetts Department of Public Utilities on the ground that the provisions were fair and reasonable and that they came within the scope of management. The department said that in such a case a rule should not be disturbed by the department as a regulatory body.

On the question whether the matter was subject to the jurisdiction of the commission, it was said that the language of the statute conferring jurisdiction upon the commission to regulate service was broad enough to include regulatory jurisdiction over the telephone directory, including the classified section.

One of the rules under attack provides that the company's liability arising from errors or omissions in directory listings (other than charged listings) shall be limited to the amount of actual impairment of the customer's service and in no event shall exceed one-half the amount of charges for exchange service during the period covered by the directory in

which the error or omission occurs. The other rule provides that in cases of charged directory listings the liability of the company shall be limited to an amount not exceeding the amount of charges for charged listings during such period.

The department said:

It is obvious that in the preparation of a telephone directory containing many thousands of names and listings, errors and omissions will occur notwithstanding the greatest of care. Questions are bound to arise, also, such as whether certain applicants have the right to use particular trade names, trade-marks, or descriptions. It is only just, therefore, that the company should be permitted to limit its liability reasonably in such cases and in cases of ordinary errors or omissions. The general regulations and the contract stipulation do not by their terms purport to limit the company's liability for gross negligence or wilful misconduct. To preclude the company from limiting its liability for ordinary mistakes in the directory would be to encourage and invite litigation which might well become so costly to the company as to affect rates adversely to the public interest.

*Rosendorn v. New England Telephone & Telegraph Co. (DPU 6443).*



## Controlling Influence of Subsidiary under Holding Company Act

THE Federal Circuit Court of Appeals, Sixth Circuit, in upholding an order of the Securities and Exchange Commission [*Re Detroit Edison Co. (1940) 35 PUR(NS) 65*] denying a declaration that the Detroit Edison Company was not a subsidiary of North American Company under § 2(a) (8) of the Holding Company Act, laid down principles to be used in determining the

question of controlling influence. The court said that the commission had wide discretion in determining what is controlling influence of a parent over a subsidiary, although this part of the act has its guidepost, which prevents the commission from exercising arbitrary power in enforcing it. The court continued:

The types of control referred to are: (1) through complete ownership of capital

AUG. 14, 1941



## THE LATEST UTILITY RULINGS

stock, (2) a majority ownership, (3) through a legal device without majority ownership, such as pyramiding through holding companies or a large issue of non-voting stock with a comparatively small issue of stock with voting rights, or voting trusts, (4) minority control, which exists when comparatively few shares of corporate stock are in the hands of one group and the remainder widely scattered, (5) management control, which exists where all the stock is so widely distributed that no stockholder takes sufficient interest in the affairs of the corporation to influence or control it, (6) proxy control through committees, (7) through interlocking corporate officers or directors.

The evidence in the case, it was said, showed marked features and significant incidences of the latent power of the North American Company to exercise a controlling influence over Detroit Edison. The fact that the parent company may have abandoned some of the characteristics of controlling influence, it was said, did not require the commission to disregard prior interrelated activities where there was no showing that latent power to resume such control had been extinguished.

The statute, it was pointed out, contemplates action prospectively. It is a preventive measure intended to regulate

action before the interests of those concerned are adversely affected. The prime factors in determining statutory exemptions, said the court, are

... the size and extent of the company involved, the intercompany relationship, the distribution of its securities and the opportunity presented because of the relationship between the parent and subsidiary for excessive charges for services, construction work, equipment, and materials, and the transactions entered into in which evil may result, because of the absence of arm's-length bargaining or restraint of free and independent competition.

The court held to be without merit a claim that the order was void because the Detroit Edison Company, being engaged in intrastate activities, was not subject to regulation. The application for a declaration as to status did not ask for exclusion from the provisions of the act because of the intrastate character of the applicant, and it was said that a request for a declaration as to status would be incompatible with a challenge to the validity of the act. Moreover, until some order of the commission adversely affected the petitioner, a challenge to constitutional validity would be premature. *Detroit Edison Co. v. Securities and Exchange Commission*, 119 F(2d) 730.



### Rates Must Produce Expenses and Return on Fair Value Including Going Value

AN order of the board of railroad commissioners of North Dakota was set aside on the ground that rates were not based upon fair value, including going concern value, and on the further ground that the commission had arbitrarily disallowed actual expenditures by the company management. The supreme court of North Dakota, in affirming a lower court decree in favor of the utility company, held that the state statutes governing rate making were not to be interpreted as requiring rates to be based upon anything else than fair value.

A North Dakota statute relating to the valuation of property for rate making requires the commission to investi-

gate and determine "the value of the property of every public utility used and useful." It further provides that the value shall be such sum as represents "the money honestly and prudently invested in the property." The court pointed out that in *Re Western Electric Co.* (ND) PUR1923C 820, 830, the board had ruled that the value of the property must be determined as of the time of the inquiry, and in later decisions the commissioners had consistently followed that rule. Moreover, the commissioners' interpretation had received judicial approval in *Grand Forks v. Red River Power Co.* (1936) 12 PUR(NS) 353, 359. The fair value basis, it was

## PUBLIC UTILITIES FORTNIGHTLY

said, had been upheld by Federal and state courts, although subjected to severe judicial and academic criticism.

On the question of going concern value it was said that this does not include either good will or franchise value, but that a utility plant which has a history of continuous profitable operation over a long period of years has a going concern value. Under the statute, it was held, the board is required to make a finding of fact setting forth the amount at which going concern value has been allowed.

In making allowances for operating expenses, the court held, the board should allow such amounts as in its judgment are necessary, but the judgment which the commission must exercise is a judgment based upon the evidence. It must not disregard undisputed evidence of actual expenditures and substitute its opinion of what the expenditures for any specific purpose ought to be. The court

disapproved the disallowance of expenditures for attorney's fees and dues and donations. The board had cut down the amounts without showing bad faith or showing that any particular expenditure was excessive.

Justice Christianson, in a dissenting opinion, disagreed with the fair value rule, and in an extensive discussion of prudent investment under Massachusetts and Wisconsin decisions stated that the pronouncements of the Supreme Court of the United States could not change the clear words of the North Dakota statutes.

He said that notwithstanding disapproval by the Supreme Court of the prudent investment theory, some states had continued to apply it, and that court had refused to interfere with rates based upon a valuation reached by that method. *Northern States Power Co. v. North Dakota Board of Railroad Comrs. et al.* 298 NW 423.



### Electric Company and Hotel Company Held to Be Subsidiaries under Holding Company Act

**P**AUL Smith's Electric Light & Power & Railroad Company and Paul Smith's Hotel Company, which operate in the Adirondack region of New York state, were denied declarations under § 2(a) (8) of the Holding Company Act to exclude them from the category of subsidiary companies. The Securities and Exchange Commission held that there had been a failure to show that their management and policies were not subject to a controlling influence by holding companies. Upon the same findings the commission denied an application by Associated Gas and Electric Company and other affiliates, pursuant to § 2(a) (7), for a declaration as to their holding company status.

The commission noted that the fact that a statutory subsidiary continuously chooses to avail itself of the counsel and assistance of its statutory parent is entitled to great weight in determining whether the statutory subsidiary is "sub-

ject to a controlling influence" in the language of § 2(a) (8). The commission also referred to the question of veto power, stating that the existence of this power is also a factor to be considered. The commission commented:

Because Associated owns more than one-third of the voting securities of both power company and hotel company, its affirmative approval is necessary under New York law for the undertaking of such corporate activities as issuing preferred stock, mortgaging property to secure debt, voluntarily selling franchises or property, effecting consolidations and dissolutions, and making various changes in the certificate of incorporation. Thus, Associated has a veto power over any of these activities.

As to a contention that even if the commission found the power company to be subject to the control or controlling influence of Associated, the hotel company was not subject to such control because Associated had not performed services for the hotel company, it was

## THE LATEST UTILITY RULINGS

said that in view of the fact that the directors and officers of both companies were identical, stock ownership of Associated was substantially identical in both companies, and in view of the his-

torically close relationship of the two companies, that contention was without merit. *Re Paul Smith's Electric Light & Power & R. Co.* (File Nos. 31-490, 31-502, 31-479, Release No. 2854).



### Official Action of Municipal Authorities Not Subject to Commission Control

THE California commission authorized the sale of a water plant by a corporation to a municipality operating a competing system upon a showing that water operations in the city had reached the unfortunate state where it was no longer possible for either system to operate at a profit. The company could not conduct its business in competition with the municipal waterworks except at a continuous and substantial out-of-pocket loss.

An objection against approval of the property transfer, primarily on the grounds that the action of the city council in entering into an agreement to purchase properties did not have the ap-

proval of the majority of the electorate of the city, was overruled with the following statement:

In the light of these circumstances, we are of the opinion that the application, as amended, should be granted. It would appear highly improper as wholly foreign to its regularly constituted authority and jurisdiction for this commission to attempt to pass judgment upon the propriety of the official action taken by the duly constituted municipal authorities leading to the acquisition of any of the properties involved herein, which, in their opinion, appeared to be necessary and useful to their city.

*Re California Water Service Co.* (Decision No. 34207, Application No. 24038).



### City's Complaint against Terminating Rate Inquiry Is Dismissed

THE city of Pittsburgh complained in the Pennsylvania Superior Court against an order of the commission terminating an inquiry into the reasonableness of rates of the Duquesne Light Company.

This order was made pursuant to an agreement by the utility to file new tariffs which would effect a reduction in gross revenues of not less than \$1,724,000 annually. After a number of hearings the commission had filed an interim report and order imposing temporary rates designed to effect a reduction in revenues of \$1,250,000. Several questions were at that time still to be decided. Later, as the result of negotiations, the order of dismissal was entered.

The city contended that having made a final order approving the new rate with-

out first having ascertained the facts which it formerly recognized to be necessary for the determination of reasonableness, the commission had in effect repudiated its own previous order. This contention, said the court, was as untenable as it was ingenious. In the words of the court:

When, in the temporary rate order, the commission mentioned certain facts to be determined before it could ascertain the reasonableness of the rates, it was talking about the requirements necessary to support an adverse order imposing a reduction on the utility.

The last order, said the court, was purely administrative. It did not decide anything adversely to the city. *City of Pittsburgh v. Pennsylvania Public Utility Commission.*

## PUBLIC UTILITIES FORTNIGHTLY

### Life Insurance Company Granted Exemption As Temporary Holding Company

**A**N application by the Massachusetts Mutual Life Insurance Company for an exemption as a temporary holding company under § 3 (a) (4) of the Holding Company Act was granted for a period of six months. The insurance company, because of the bankruptcy of the Indiana Consumers Gas and By-Products Company, had received shares of voting securities in exchange for bonds. As a result of this and a transaction involving a property sale, the insurance company became a holding company under the provisions of the statute by reason of the acquisition of securities for the purposes of liquidation or distribution in connection with a bona fide debt previously contracted.

The insurance company alleged that it intended to dispose of its holdings in Indiana Gas and Chemical Corporation, a

subsidiary holding company exempted from registration by virtue of Rule U-2, as soon as certain recently effected changes with respect to the latter's business, including the acquisition by it of a subsidiary, have had an opportunity to be reflected in increased earnings and improved market prices of the stock. It was expected that the securities would be disposed of within the ensuing six months.

The commission, in granting the exemption, observed that ownership by a large life insurance company of 10 per cent or more of the voting securities of a public utility holding company would not be consistent with the policy of the exemption provisions if such ownership were prolonged. *Re Massachusetts Mutual Life Insurance Co.* (File No. 31-510, Release No. 2852).



### Other Important Rulings

**T**HE supreme court of New Jersey held that the board of public utility commissioners has no authority to direct 67 individual bus owners to unite in constructing and maintaining a bus shelter wherein patrons of the various busses may be housed while waiting for transportation. *Bayonne v. Board of Public Utility Commissioners*, 19 A(2d) 809.

A city contracting with a husband to furnish water service at his home, could, after his death, make the furnishing of further service conditional on his widow's signing a new application therefor, according to a ruling of the court of civil appeals of Texas. *City of Dallas v. Brown*, 150 SW(2d) 129.

The Colorado commission in a water rate case held that market value, rather than estimates based upon the asked

price of land and water rights, was the best criterion to determine value. The commission allowed 5 per cent for depreciation and 7 per cent for return. *Re Indian Hills Water System Asso.* (Application No. 5462, Decision No. 16989).

The supreme court of Mississippi held that although a carrier need not be given an opportunity to rearrange its schedules to meet situations presented under new applications before a certificate can be granted to another, an applicant for such a certificate could not, by arranging his schedules to miss connections with the existing bus line at some connecting points, claim a right to run his busses over the route of the older and more adequate line. *Dixie Greyhound Lines, Inc. v. Public Service Commission et al.* 1 So(2d) 489.

NOTE.—The cases above referred to, where decided by courts or regulatory commissions, will be published in full or abstracted in *Public Utilities Reports*.

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# *Public Utilities Reports*

COMPRISING THE DECISIONS, ORDERS, AND  
RECOMMENDATIONS OF COURTS AND COMMISSIONS



VOLUME 39 PUR(NS)

NUMBER 2

## Points of Special Interest

SUBJECT	PAGE
Gas cost allocation - - - - -	65
Initial block in gas rate schedule - - - -	65
Gas rates for low-rent housing project - - -	100
Burden of proof under Natural Gas Act - - -	102
Interstate and intrastate telephone tolls - - -	111
Due process in eliminating discrimination - - -	111
Protection of carriers in granting certificates - - -	124

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# Titles and Index

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## TITLES

Home Gas Co., Re .....	(Fed.P.C.)	102
Jackson Housing Authority, Re .....	(Tenn.)	100
Michigan Bell Teleph. Co. v. Public Service Commission .....	(Mich.Sup.Ct.)	111
Queens Borough Gas & E. Co., Re .....	(N.Y.)	65
Theel Bros. Rapid Transit, Re .....	(N.D.)	124



## INDEX

- Appeal and review—Commission orders, 111.
- Apportionment—gas cost, 65.
- Certificates of convenience and necessity—meaning of terms, 124.
- Discrimination—due process in rate investigation, 111.
- Expenses—merchandising and jobbing, 65; payments to affiliates, 102.
- Housing project—gas rates for, 100.
- Merchandising and jobbing—elimination in rate case, 65; regulated transportation, 124.
- Motor carriers—certificate for operation, 124.
- Rates—burden of proof, 102; combined billing for low-rent housing project, 100; comparison of schedules, 65; cost differentials and allocations, 65; distance factor, 65; effect of filing, 102; gas, 65, 100, 102; initial block, 65; interstate and intrastate telephone tolls, 111; jurisdiction of Commission, 111; presumption as to filed rates, 111; seasonal, 65; uniformity in territory, 65; unit for rate making, 65.
- Reparation—charges collected under filed rates, 65.
- Return—interstate and intrastate telephone tolls, 111.
- Service—check-metering plan for low-rent housing project, 100.



RE QUEENS BOROUGH GAS & ELECTRIC CO.

NEW YORK DEPARTMENT OF PUBLIC SERVICE, STATE DIVISION,  
PUBLIC SERVICE COMMISSION

## Re Queens Borough Gas & Electric Company

[Case No. 9747.]

*Rates, § 144 — Cost differential — Comparative data — Cost allocations.*

1. Rate schedules cannot be produced from comparative data from numerous viewpoints, purporting to show that property in one area served by a gas company is less in relation to the amount of gas sold than in another area; and cost allocations often produce widely divergent results, p. 70.

*Rates, § 144 — Cost basis — Average cost — Revenue per unit.*

2. Many errors in comparing cost of service are traceable to the false assumption that average costs or revenue per unit of service determine whether one rate schedule is higher or lower than another, p. 71.

*Rates, § 134 — Comparison of schedules — Classes of consumers.*

3. Two identical rate schedules produce varying results when the amounts sold to different classes of consumers vary, and this holds not merely as between residential, commercial, and industrial consumers, but as to the distribution of consumption in each of these classes, p. 71.

*Apportionment, § 30 — Gas cost — Service to subsidiaries — Assumed pooling.*

4. An assumed pooling of all production, storage, and transmission facilities of a gas company and subsidiaries to which it furnished service, in connection with a determination of service cost, was held to be subject to several important criticisms, including the questionable propriety of any pooling arrangement in the case of companies where there is practically no transfer of gas except in one direction, the inclusion of a plant of a subsidiary which could not be used in its rated capacity because of lack of needed equipment, and the inclusion of production facilities in the pool with a credit to a subsidiary for its upkeep and fixed charges, p. 72.

*Rates, § 196 — Unit for rate making — Merchandising and jobbing business.*

5. Merchandising and jobbing business, over which the Commission has no regulatory powers, should be eliminated from consideration in a determination of gas rates over which the Commission has control, p. 76.

*Expenses, § 80 — Merchandising and jobbing.*

6. Expenses relating to merchandising and jobbing work of a gas utility, including administrative and general expenses, depreciation and return upon property, and taxes related to the business, should be excluded in determining the cost of gas service, p. 76.

*Rates, § 144 — Cost factors — Distance from production plant.*

7. Consumers located some distance from a gas plant in a relatively small territory should not be burdened with higher rates than consumers nearer the plant, p. 81.

## NEW YORK DEPARTMENT OF PUBLIC SERVICE

### *Apportionment, § 9 — Cost of gas service — Increment cost method.*

8. The fundamental difficulty with the increment cost basis for allocating cost, as a basis for fixing rates for different classes of service, is the problem of what classes of service must bear the basic cost and what are to bear only the increment cost, p. 87.

### *Rates, § 388 — Gas — Summer season.*

9. A substantially higher rate should be charged for gas during the summer season where the peak demand is in the summer and that peak is relatively very important; recognition of the burden imposed on the company through increased operating expenses and fixed charges to serve the summer business requires that there be a substantial difference between the cost to consumers who are served throughout the year compared with those who take service only during the summer months, p. 88.

### *Rates, § 374 — Gas — Initial block — Customer costs.*

10. Not all customer costs should be covered by the initial block in a gas rate schedule, but part should be spread over the other blocks and be represented in the price of the commodity, p. 90.

### *Rates, § 374 — Gas — Initial block — Amount of gas.*

11. The determination was made that the first block in a gas rate schedule should contain 400 cubic feet in view of the necessity for a substantial amount, but not so small an amount as to violate a statute prohibiting service charges, and other factors affecting such determination, p. 90.

### *Rates, § 388 — Gas — Summer customers — Initial block.*

12. The charge to summer customers for the initial block of gas should be substantially higher than for the initial block in the year-round rate, where summer customers causing a peak demand should pay higher rates, p. 90.

### *Rates, § 171 — Uniformity in territory — Blocks.*

13. Use of the same block division in a block rate schedule for gas service is desirable throughout the territory and in all the rates, p. 96.

### *Rates, § 374 — Blocks — Rate curve.*

14. In the formation of any gas rate schedule it is important that there shall be no marked changes in the rate curve at any one point, as the cost of supplying an additional amount of gas to each consumer decreases per thousand cubic feet as the amount of gas consumed increases; and the general principal applied to ordinary conditions is to produce a logical rate curve with no humps or valleys—no abrupt changes—as there are no abrupt changes in the cost of service, p. 96.

### *Rates, § 374 — Gas — Blocks.*

15. The first two blocks, including the initial block, in a gas rate schedule should be approximately equal to the average use, p. 96.

### *Rates, § 388 — Gas — Summer customers — Minimum charges.*

16. Customers who are served throughout the year should not pay the higher rates for summer service, and any customer who has not received service for a completed year should pay the rate specified for the period month by month until the year is completed, and when he has completed a full year his bills should be refigured and a refund or credit made for the amount he has paid during the summer months at the higher rates; in order to obtain the lower rates during the summer months he must have

## RE QUEENS BOROUGH GAS & ELECTRIC CO.

been a customer for at least one year, and if no gas is consumed in any month, he must pay the minimum charge in order to avoid paying the higher rates during the summer months, p.97.

### *Rates, § 389 — Gas — Heating service.*

17. The gas rate to a heating customer, who pays for gas used for cooking at the heating rate, should be the same for the year-round customer and for the heating customer, and in the blocks beyond average consumption the rate should decline, and the consumer who uses gas for hot water heating should receive a substantial advantage, p. 97.

### *Rates, § 144 — Territorial differentials — Cost differences.*

18. Gas rates in territory where the cost of service is higher than in other territory of a gas company should be fixed at a rate having a constant differential, p. 98.

### *Reparation, § 43 — Charges collected under filed rates.*

19. A gas company which has filed increased rates, disapproved by the Commission after investigation, should be permitted to retain revenues collected provided new rates established by the Commission are promptly made effective, where the character of the schedules established is so different from the old rates or the new rates (involving higher rates for some customers) that it does not seem reasonable to require the company to make refunds on the one hand or attempt collections on the other, p. 99.

[May 26, 1941.]

**I** NVESTIGATION on motion of Commission as to gas rates; filed rates disapproved and new rate schedules permitting increased revenues established.

APPEARANCES: Gay H. Brown, Counsel (by George E. McVay, Assistant Counsel), for the Public Service Commission; Griggs, Baldwin & Baldwin (by Charles G. Blakeslee and E. J. Crummey), New York city, Attorneys for Queens Borough Gas and Electric Company; W. C. Chanlor, Corporation Counsel (by Harry Hertzoff, Assistant Corporation Counsel), New York city, for the city of New York; John M. Mitchell, Mineola, Deputy County Attorney, for the county of Nassau; J. J. McCoy, New York city Consultant representing Utilities Consultants, Inc.; Robert E. Tinsley, Malverne, representing incorporated village of Malverne; M. John J. Jacobs, Counsel,

Brooklyn, for United Taxpayers of Long Beach, Inc.

MALTBIE, Chairman: This case relates to increases in gas rates in certain parts of the borough of Queens, New York city, and of Nassau county, supplied by the Queens Borough Gas and Electric Company. The rates involved, with certain exceptions of short-term rates, were allowed to become effective January 9, 1939, under the provisions of § 113 of the Public Service Law for refunding with interest any portion of the increase not found to be justified by the Commission after investigation and hearings.

One opinion has already been ren-

## NEW YORK DEPARTMENT OF PUBLIC SERVICE

dered. On February 21, 1940, the Commission adopted a memorandum requiring the company to cancel certain short-term rates and provisions. Many unsatisfactory aspects of the testimony presented by the company were pointed out. The legal obligation resting upon the company to justify not only the increases as a whole but the particular schedule presented and reasonableness of the rates individually was emphasized; and it was decided to give the company a further opportunity to meet its obligations, which it had failed to do despite repeated warnings as to the inadequacy of its proof.

In the opinion in Case No. 8403, involving this company's gas and electric rates, decided October 18, 1938, 29 PUR(NS) 391, a large reduction in electric rates was found to be justified. As to the gas department, the return for several years prior to December 31, 1937, was stated to have been less than that to which the company was legally entitled. In our opinion of February 21, 1940, in the present case, the conclusion was stated that in toto the alleged increased income would not exceed a fair return. But these findings were only as to the over-all situation at that time, and, of course, were based only on the evidence then in the record. It was repeatedly stressed that an apparent deficiency of income below that to which the company might legally be entitled did not of itself justify a particular rate schedule designed by the company.

A further point for consideration has been raised by the city of New York. Mr. Harry Hertzoff, assistant corporation counsel, contends that a

differential in rates should obtain in favor of consumers in the company's territory inside the city limits, as compared with the territory in Nassau county. He claims that the cost of service is higher in Nassau county than in New York city. His contention was referred to in the opinion of February 21, 1940, but it was held that the record at that time did not provide an adequate basis for rate differentials.

Since that time, eight hearings have been held at which testimony and numerous exhibits have been presented bearing on various phases of the case, including later revenue and expense figures, operating statistics, changes in plant account, and various allocations and apportionments relating to business with affiliated companies, to various rates and elements of rates and to the question of rate differentials between geographical areas or political subdivisions.

The city of New York has submitted no testimony to support its contentions but maintains that the record proves a uniform rate unreasonable, that the Commission must find what the differential should be and that it must determine reasonable rates. Mr. John M. Mitchell, representing Nassau county, and counsel for the company object to any differential.

Thus there are two main questions to be determined:

(1) Has the company borne the burden of proof imposed upon it by statute, has it justified the increased rates which it proposes for various classes of consumers?

(2) Should the same schedule of rates apply to the areas supplied in the city of New York and in Nassau



## RE QUEENS BOROUGH GAS & ELECTRIC CO.

county; are any rate differentials justified by the testimony?

There are many subsidiary questions, but these are the two main ones to be considered and decided. The latter will be taken up first.

### *History of Gas Rate Differential*

At the time of the enactment of the Public Service Law in 1907, the Queens Borough Company had one rate schedule for its entire territory.

Upon June 23, 1911, the company was ordered by the Public Service Commission for the First District to reduce its gas rate in New York city of \$1.30 per thousand cubic feet to \$1.20 for the six months from July 1, 1911, to January 1, 1912, and to \$1.15 thereafter. (2 PSQR [1st Dist NY] 544). That Commission had no authority over the area outside of New York city and the Public Service Commission for the Second District made no similar order. However, the outside rates were voluntarily reduced, and for several years (until 1918), the company had uniform rates. Upon May 28, 1918, the company applied to the First District Commission for an increase in its gas rates from \$1.15 to \$1.40 per thousand (Case No. 2293). The application was denied in September, 1918, and the company continued to charge the \$1.15 rate in New York city. See PUR 1918F 872.

In the meantime, on May 9, 1918, the company filed with the Second District Commission a tariff effective June 10, 1918, increasing its gas rate in Nassau county from \$1.15 to \$1.40 per thousand cubic feet with a minimum charge of 40 cents per month. This rate became effective, complaints

were filed and the Commission for the Second District instituted Cases Nos. 6475 and 6515. Several hearings were held in each case but neither proceeding was closed nor any determination made.

The next move came in 1921. Meanwhile, the Public Service Commission had been reconstituted by new legislation and the company had taken steps to increase its rates from \$1.15 per thousand cubic feet in the city of New York and \$1.40 outside the city with a minimum charge of 40 cents, to \$1.50 and a minimum charge of \$1 in both areas.

The proposed increases were suspended by order of the Commission and hearings held.

On August 30, 1922, the Commission adopted an order establishing the following rates *throughout the territory* (but not applying to the city of New York as a customer) effective October 1, 1922:

First	100,000	cu. ft. per meter per month, \$1.30 per M cu. ft.
Next	200,000	cu. ft. per meter per month, \$1.25 per M cu. ft.
Next	300,000	cu. ft. per meter per month, \$1.20 per M cu. ft.
Next	400,000	cu. ft. per meter per month, \$1.15 per M cu. ft.
All	over 1,000,000	cu. ft. per meter per month, \$1.10 per M cu. ft.

There was no mention of the minimum monthly bill.

This order was accepted by the company on September 8, 1922.

Thus, generally speaking, the rates were raised in New York city and lowered outside.

At the hearing on April 27, 1922, Commissioner Semple asked Assistant Corporation Counsel Fertig for his suggestions as to the policy regarding charges for gas of this company with-

## NEW YORK DEPARTMENT OF PUBLIC SERVICE

in and without the city (Case No. 79-D). Commissioner Semple announced that if it was proposed to have a different rate within the city, it would be necessary to have apportionments of expenses and receipts. Three more hearings were held before the Commission's order of August 30, 1922, was issued. The record in that case contains 1,861 pages of stenographer's minutes, with exhibits bearing on valuation, revenues, and expenses, apportioned between gas and electric services but there is no attempt to ascertain whether the cost of rendering service in the two areas was the same or different. Adjournment was taken on October 3, 1922, subject to the call of the Commission. The rate order had already been issued and accepted. *No opinion was rendered, and thus the question of differential rates was not discussed, and the reasons for the institution of uniform rates are not known.*

### *Is There a Cost Differential?*

[1] In support of his contention that gas rates in the New York city area should be lower than in Nassau county, counsel for New York city has presented comparative data from numerous viewpoints purporting to show that the property in the New York city area is much less in relation to the amount of gas sold than in Nassau county, from which he argues that rates should be appreciably lower. He called no witnesses to show how a rate schedule should be worked out or what rates would yield a fair return upon the fair value of the property or what rates would be justified on the basis of relative costs. He depends for support of his contentions

entirely upon the testimony presented by employees of the Commission and witnesses called by the company.

Rate schedules cannot be produced from such comparative data and cost allocations often produce widely divergent results; but before proceeding to analyze the testimony in detail, let us examine the testimony of Mr. Goldthwaite, the engineer for the Commission, and Mr. Scharff, the engineering witness for the company. It is interesting to see how far their studies show a variation in average costs as allocated by them.

Mr. Scharff used the operating expenses, depreciation, and taxes for the year 1938 as adjusted by Mr. Hennesy, another witness for the company. For return, he used 6 per cent upon the original cost less accrued depreciation computed by Mr. Hennesy, who purported to use the figures found by the Commission in the prior rate case bringing them down to date by adjustments which were said to be in accordance with the methods used by the Commission in the rate determination. The results are set forth in Exhibit 112. Dividing the gross cost (operating expenses, depreciation, taxes, and 6 per cent return) by the total amount of gas sold to general consumers (excluding the gas sold to the Long Beach Gas Company and the Nassau and Suffolk Lighting Company as he allocated the costs for such gas), one obtains an average per thousand cubic feet of gas sold in New York city of \$1.245. In the Nassau county area, by a similar process, the average cost was \$1.401. This shows an apparent average differential of 15.6 cents per thousand.

Mr. Goldthwaite's computations re-

## RE QUEENS BOROUGH GAS & ELECTRIC CO.

late to the year 1939. He uses the same base for computing his rate of return but modifies the operating expenses, depreciation, and taxes by excluding certain items which he considered not properly a part of cost. Dividing total costs under his first method (apportionment method) by the amount of gas sold to general consumers in the two areas, one obtains an average cost in the city of New York area of \$1.067 and in the Nassau county territory \$1.146. The differential is 7.9 cents per thousand cubic feet. According to the increment cost method, the respective rates obtained are \$1.218 and \$1.276, a differential of 5.8 cents per thousand cubic feet.

It is to be kept in mind that the figures are for different years and there is one significant change. The amount of gas sold to general consumers in New York city area decreased in 1939 as compared with 1938 a little over 1 per cent, whereas in the Nassau county area the amount of gas sold increased in 1939 over 1938 between 3 and 4 per cent. As all costs do not increase in proportion to the amount of gas sold, the effect of these changes in relative consumption would be to diminish the apparent differential in 1939 compared with 1938. But it is still obvious that there is a wide divergence between the results obtained by the two engineers using the same basic figures.

[2] When using average figures for the purpose of reaching general conclusions, extreme care is needed. Many errors are traceable to the false assumption that average costs or revenue per unit of service determine

whether one rate schedule is higher or lower than another.

Keeping in mind that during 1938 and 1939, an identical rate schedule was in force throughout the entire territory served by the Queens Borough Company, if average results are a dependable index of the relation of rate schedules, it would necessarily follow that the average amount received per thousand cubic feet of gas sold in New York city area would be the same as that received in the Nassau county territory.

But such is not the fact in either year. In 1938, the average revenue received from New York city customers was \$1.072 per thousand; in Nassau county it was \$1.102. In 1939, similar figures for the old rates were \$1.056 in New York city territory and \$1.082 in Nassau county.

There is another significant comparison which may be made at this point. The increased rate schedule went into effect January 9, 1939, and this schedule as its predecessor was uniform throughout the territory. Dividing the amount collected from general consumers by the amount of gas sold them, it is found that in 1939 the average revenue in New York city was \$1.167, whereas in Nassau county the average was \$1.217—a differential of 5 cents. This shows that the effect of the increased rates was greater in Nassau county upon the average than in New York city.

[3] These figures illustrate what is generally known, namely, that two identical rate schedules produce varying results when the amounts sold to different classes of consumers vary, and this holds not merely as between residential, commercial, and industrial

## NEW YORK DEPARTMENT OF PUBLIC SERVICE

consumers but as to the distribution of consumption in each of these classes. Industrial rates are generally lower than commercial rates and large users obtain lower rates than small users. If the amount of service utilized by large users is relatively high, the average rate and the average cost of service will be relatively low as compared with another company having the same rate schedule with an unusually high number of small users.

About the only conclusions that may be drawn from the above analyses are that the testimony of the company's expert justifies a larger differential than that of the Commission's engineer, that in view of the different distribution of gas consumption among the various classes, the number of small users is larger in the Nassau county territory than in New York city (but the difference is not large), and that rates cannot be made merely upon the basis of average figures for the two areas.

If we were to confine our analysis to the testimony given by the company upon rehearing, the Commission would be required to dismiss the case for lack of proof; but the corporation counsel of the city of New York insists that reasonable rates shall be established for the New York city area and if this is done it will be necessary to establish rates for the Nassau county territory. Let us analyze the testimony presented and endeavor to see whether a reasonable rate schedule can be constructed from the record.

### *Service to Subsidiaries*

[4] Eliminating "other revenues" and a very small amount of gas sold to public authorities, the Queens Bor-

ough Company received about one-third of its revenues from sales to subsidiary gas companies (Nassau and Suffolk Lighting Company and Long Beach Gas Company) serving other territories and two-thirds from general consumers. Viewed from the amount of gas sold, the company sells nearly 60 per cent to subsidiaries. Statistics regarding this intercompany business from its inception were given in the memorandum of February 16, 1940, and need not be repeated here, but it is significant to note that the percentage of sales to subsidiary companies increased appreciably in 1939 and that nearly all of the increase in total sales went to them.

Considering the entire record, there are three witnesses who have testified regarding the cost of serving the two subsidiaries—Mr. Carpenter, Mr. Scharff, and Mr. Goldthwaite. The testimony of the former given in the original hearings was analyzed and discussed in the prior memorandum. Nothing further need be said here as there was no important change or addition to the testimony originally given.

In the memorandum approved by the Commission on February 21, 1940, Mr. Scharff's original testimony was stated and discussed. In his Exhibit 61, he assumed a pooling of all production, storage, and transmission facilities of the Queens Borough and Nassau and Suffolk companies and 10 per cent of the high pressure distribution system of the latter. However, it did not contain all of the defects found to be contained in Exhibits 27 and 59 submitted by Mr. Carpenter. These two exhibits gave the Nassau and Suffolk company a

## RE QUEENS BOROUGH GAS & ELECTRIC CO.

highly preferential position, virtually computing the rate to be charged on an increment cost basis to the Nassau and Suffolk, with certain additional benefits to that company due to the pooling arrangement. Although using the pooling arrangement, Mr. Scharff modified the methods contended for by Mr. Carpenter and changed the costs for production, storage, and transmission facilities attributed to subsidiary service. Mr. Scharff also departed from Mr. Carpenter's procedure in that he assigned some administrative and general expenses and all the fixed charges on the production plants to the pool costs.

Exhibit 61 and the pooling arrangement followed by Mr. Scharff are subject to several important criticisms:

(a) The propriety of any pooling arrangement is very questionable in the case of two companies like Queens Borough and Nassau and Suffolk, where there is practically no transfer of gas except in one direction. Nassau and Suffolk furnished no gas to Queens Borough in the five years 1934 to 1938, except 5,209 thousand cubic feet in 1938 for which \$2,083.60 were received.

(b) The entire Hempstead plant of Nassau and Suffolk is included in the pooling arrangement, but it cannot be used to its rated capacity because of the lack of needed equipment. According to Exhibit 115, the Queens Borough Company plant had a rated capacity of 15,450 thousand cubic feet per day, and the maximum day's make was 13,242 thousand cubic feet, which is 85 per cent of the rated capacity. Mr. Carpenter testified that the actual capacity of that plant could be 17,000; a maximum daily make of 13,242

would be 78 per cent. The company's annual report for 1938 gives a maximum daily make of 12,400 for that year, which is 73 per cent of the actual capacity according to Mr. Carpenter, or 80 per cent of the rated capacity. The Hempstead plant has a rated capacity of 10,500 thousand cubic feet per day; the maximum day's make in 1938 was 5,277, or 50 per cent of rating; while in 1939 it was only 4,606 thousand cubic feet or 44 per cent. In order to bring the actual capacity of the Hempstead plant up to the rated capacity, nearly \$600,000 would need to be spent.

(c) Mr. Scharff includes the production facilities of the Queens Borough Company in Exhibit 61 at a cost less depreciation of \$1,646,872 for 1938; this is \$133 per thousand cubic feet of maximum daily make in 1938. He includes the Nassau and Suffolk production plant at \$802,059, which is \$152 per thousand cubic feet of the 1938 daily maximum. Using the same cost figures with the 1939 maximum makes, the comparison is \$124 for Queens Borough and \$174 for Nassau and Suffolk. Using annual production in thousand cubic feet (analogous to Mr. Scharff's use of annual requirements in thousand cubic feet for apportionment purposes), the figures are:

Production Plant	Cost less depreciation per Exh. 61	Annual production 1938	Plant per M cu. ft.
Queens Borough (Rockaway)	\$1,646,872	2,965,822	\$0.56
Nassau and Suffolk (Hempstead)	802,059	893,507	0.90

To include this entire plant in the pool and credit its upkeep and fixed charges to Nassau and Suffolk unjust-



## NEW YORK DEPARTMENT OF PUBLIC SERVICE

ly benefits the latter and burdens the other company.

(d) The injustice of including this plant in full might be remedied in part if adequate depreciation were deducted from its cost to reflect the obsolescence indicated by the testimony of Mr. Carpenter who compared the two plants. Mr. Scharff not only avoided recognition of these facts but applied the percentage of depreciation to the Hempstead plant (storage and transmission as well as production plant) that the Commission had found for the Queens Borough plant. Thus, in effect, he acted on the erroneous assumption that the Hempstead plant was just as modern, useful, and valuable per dollar of original cost new as the Queens Borough plant.

(e) No official determination of the original cost or depreciation of the Nassau and Suffolk property has been made. Mr. Scharff used book cost figures.

(f) Mr. Scharff put into the pool not only the production and storage facilities of the Nassau and Suffolk but also a considerable amount of its transmission property and part of its high-pressure distribution mains. Where gas is transmitted almost entirely from the Queens Borough to the other companies, Queens Borough is unjustly burdened by such pooling of transmission facilities.

(g) The Queens Borough plant is more efficient than the Hempstead plant and its production expense is less. Annual reports to the Commission for 1939 show a production expense of 29.55 cents per thousand cubic feet made for Queens Borough and 38.86 cents for Nassau and Suffolk. Pooling these costs means that

Queens Borough bears a share of Nassau and Suffolk's higher costs, although it uses its own gas almost entirely.

Mr. Scharff attempted to meet some of these criticisms and increased the costs allocated to sales to subsidiaries to the extent of about \$53,000. The increases were as follows:

Customers' accounting and collecting ..	\$1,193
Operating taxes .....	22,243
Fixed charges on general plant .....	22,816
Return on working capital .....	6,306
Return on organization expenses ....	129
<b>Total .....</b>	<b>\$52,687</b>

The first item was obtained by arbitrarily taking 1 per cent of the total cost.

The increase in operating taxes (other than real estate and special franchise taxes) is 35.23 per cent of all of such taxes paid by the company in 1938. This percentage was obtained by comparing the other operating expenses which he allocated to the subsidiaries with the total operating expenses of the Queens Borough Company.

The third item representing an increase in fixed charges on general plant was obtained by applying 26.95 per cent to the total of the fixed charges for general plant as he computed them. This percentage was derived from a comparison of the allocated fixed charges on production, storage, transmission, and distribution plant to the total of his computed fixed charges for the entire company.

The other two items were obtained by applying the same percentage to his computed return on working capital and "organization" for the gas department.

The total allocated cost according



## RE QUEENS BOROUGH GAS & ELECTRIC CO.

to Mr. Scharff for the gas sold to the subsidiaries is \$758,044, or an average cost of 48.97 cents per thousand sold. According to the annual reports to the Commission, the Queens Borough Company actually received \$623,879 after deducting an adjustment made the following year but applicable to 1938. Comparing Mr. Scharff's allocated cost with the revenue attributable to the gas sold, it appears that the Queens Borough Company received nearly \$135,000 less than the allocated cost to the Queens Borough Company of the gas supplied to subsidiaries. Thus, if the Queens Borough Company were to charge its subsidiaries the cost of gas supplied to them, upon the basis of Mr. Scharff's figures, its revenues would be increased \$135,000 for 1939.

When considering these figures and their significance, it is to be kept in mind that Mr. Scharff is a witness called by the company, that in his allocation of costs he has accepted Mr. Hennessy, and that in this cost allocation he has disregarded the contracts between the Queens Borough Company and its subsidiaries which Mr. Carpenter attempted to justify at great length but which the Commission has found were not supported because of lack of adequate proof regarding many underlying figures.

Perhaps it should be stated at this point that Mr. Scharff contends that rates should not be based solely upon cost but that many other general considerations must be weighed and that the resultant figure must be a matter of judgment rather than of mathematical computation.

Mr. Goldthwaite, consulting engineer to the Commission, did not testi-

fy at the original hearings. Due to the unsatisfactory character of the original record, he was instructed to study the situation and to testify as to the results. He made two studies using as a basis the operating costs for the year 1939 and the value of the property found by the Commission in the original rate case (No. 8403) [29 PUR(NS) 391] brought down to date by Mr. Hennessy. Thus, so far as basic figures are concerned, he started at virtually the same point as Mr. Scharff, except that Mr. Scharff used 1938 figures and Mr. Goldthwaite 1939 figures. To what extent the results vary because of this fact will be considered later.

The two studies presented by Mr. Goldthwaite differ considerably in respect to the fundamental principles followed. In one, he attempted to allocate costs to the different classes of service upon the basis of relative use without any preference being shown or any consideration given to the effect of increased sales to serve subsidiaries. In the second study, he treated certain sales to subsidiaries on the increment cost basis, thus placing upon the general consumers of the Queens Borough Company the basic costs of providing, maintaining, and operating the system and attributing to the subsidiaries only the additional costs which he estimates would be incurred if such business bore only the added costs thus imposed.

In each of these methods Mr. Goldthwaite starts with a grand total of \$2,376,638.58 representing operating expenses and fixed charges of the Queens Borough Company for 1939. The operating expenses, depreciation, and taxes were derived from Exhibit

## NEW YORK DEPARTMENT OF PUBLIC SERVICE

74, which was prepared by a company witness, and purports to reflect the figures to be found on the books of the company adjusted by the witness to conform to the findings made in the prior determination of the Commission.

A 6 per cent return was computed on the rate base, also prepared by a company witness, with a minor correction. The witness had eliminated certain bulkhead property from the depreciation base at the beginning of 1939 in compliance with the determination of the Commission, but had failed to eliminate depreciation on this property in the figures for the end of the year. This minor correction increased the rate base of the computed return and favors the company.

In bringing down the cost and depreciation determinations made in the Commission's prior finding as of December 31, 1937, Mr. Hennessy (the company witness) excluded no property and assumed that all of the property of the company in the original finding was still used and useful in the service of the public as of December 31, 1939. Mr. Goldthwaite eliminated a piece of transmission main in Oceanside outside of the company's franchise territory, which was formerly used to serve Long Beach, on the ground that it is not now used and useful. The amount involved was small, only \$1,250.64.

[5, 6] In determining what operating expenses should be considered in finding the cost of service to New York city customers, Nassau county customers, and subsidiary companies, Mr. Goldthwaite excluded \$20,264.27 representing that part of administrative and general expenses, depreciation,

and taxes which he considered applicable to merchandising and jobbing. The Commission has no authority to regulate the rates charged for merchandise and jobbing work. Thus in any determination of rates over which the Commission has control, there should be eliminated from consideration the business over which it has no regulatory powers.

Mr. Hennessy had excluded from the reported income the amounts received for merchandising and jobbing and in so doing had also excluded the direct charges allotted to this business; but he had not excluded any costs which were related to the business which had not been separately reported on its books. It would, of course, be unfair to assume that this business was conducted without any administrative and general expenses, depreciation, and return upon any property used or taxes which were related to the business. Mr. Hennessy eliminated from his total statement of costs no such items. Mr. Goldthwaite apportioned the items—administrative and general, depreciation, taxes, and return—to the merchandising and jobbing business upon the basis of the relation of the direct expenses, as reported by the company, to the total similar expenses for all of the business of the company.

The company did not contest the principle laid down by Mr. Goldthwaite or the method of allocation. No other figures were presented. Counsel for the company in his brief contends that Mr. Goldthwaite on cross-examination admitted that the amounts he eliminated should be charged against the business in New York city and Nassau county, but

## RE QUEENS BOROUGH GAS & ELECTRIC CO.

anyone who reads Mr. Goldthwaite's testimony will see that counsel misrepresents his testimony. What Mr. Goldthwaite said was that the amount should be excluded from consideration of the cost of *gas* service, but did not express any opinion as to where it should be charged. As we are concerned here only with the cost of service to general consumers and not with whether the company made a profit or a loss on its merchandising and jobbing business, the sole question is whether these expenses should be included in the cost of *gas* service or should be excluded therefrom. Quite obviously Mr. Goldthwaite properly excluded them.

In each of his two studies, Mr. Goldthwaite attempted to distribute the various elements of cost between four classes of gas service: New York city customers, Nassau county customers, Nassau and Suffolk Lighting Company, and Long Beach Company. As we are not here concerned with the cost of service to each of the subsidiaries, we shall consider three classes: New York city customers, Nassau county customers, and subsidiaries.

### *Apportionment Cost Method*

In his first method of distributing costs (called for convenience the apportionment cost method), he used different bases for each class, selecting in each case the one which he considered best suited to the nature of the cost. Production expenses were apportioned according to the amount of gas sold; that is, the cost of producing gas is considered the same regardless of the class of service.

The fixed charges on the production

plant (depreciation, taxes, and return) were apportioned on a modified demand basis. First, he determined the amount of gas sold by each of the classes during the month of maximum send-out (December, 1939) from the Rockaway gas plant. These figures were as follows:

New York city .....	11.5 per cent
Nassau county .....	20.2 per cent
Subsidiaries .....	68.3 per cent

He then ascertained the maximum monthly sales for each of these classes regardless of when they occurred and found the relation of each to the total, obtaining nonsimultaneous demands as follows:

New York city .....	19.7 per cent
Nassau county .....	18.3 per cent
Subsidiaries .....	62.0 per cent

Then he averaged the two figures for each of the classes and obtained percentages rounded off to the following amounts:

New York city .....	16 per cent
Nassau county .....	19 per cent
Subsidiaries .....	65 per cent

Mr. Goldthwaite testified that the use of the nonsimultaneous demands tended to charge each class in proportion to the amount it would pay if it had a plant built solely for its own requirements; but he did not consider this basis as the only one to be applied and decided that in determining the fair percentage to be used each of the two elements should be given equal weight.

In order to allocate storage costs, Mr. Goldthwaite examined the facilities of the companies involved and determined that of the 8,000,000 cubic feet of storage facilities owned by the Queens Borough Company about 2,500,000 should be assigned to the sub-

## NEW YORK DEPARTMENT OF PUBLIC SERVICE

sidiaries, leaving 5,500,000 cubic feet to be divided between the New York city and Nassau county territories. Here he used the modified demand percentages adopted above for the apportionment of the generating plant; namely, 16 to New York city and 19 to Nassau county. This relationship was used to apportion all storage expenses, depreciation, taxes, and return. Later in his testimony, he modified these demand ratios and increased the storage costs assigned to New York city by \$7,500 and decreased by the same amount the storage charges assigned to Nassau county.

The transmission system was divided into several parts for the purpose of apportionment. The medium-pressure line lying almost wholly within New York city was assigned entirely to that territory. The high-pressure 16-inch line from the Rockaway plant to the Inwood holder (just outside of New York city) was prorated to each area in proportion to the amount of gas sold. Of the high-pressure lines beyond the Inwood holder, a certain line, partly 6-inch and partly 8-inch, from Central avenue to the Atlantic Beach meter was assigned entirely to the Long Beach Gas Company.

As to the remainder of the high-pressure transmission system, all branches which by their nature could serve Nassau county only were assigned to that territory; and one-half of the rest, consisting of various 16-inch, 12-inch, 8-inch, and 6-inch lines useful both for Nassau county and subsidiary service, was divided between the Nassau county territory and Nassau and Suffolk Lighting Company in proportion to the amount of

gas sold; the other half was assigned entirely to subsidiaries.

The basis of the apportionment of all costs of transmission lines was original cost of property; values were not obtainable in sufficient detail.

Distribution costs were assigned entirely to New York city and Nassau county customers; no part being allotted to subsidiaries. Expenses and fixed charges were divided according to the original cost of the distribution property in each of the two territories with the following exceptions: The work done on customers' premises was divided according to the number of meters in each territory; the cost of removing and resetting meters in proportion to the number of meters actually moved; and real estate and franchise taxes according to the company's assignment of such taxes locally to those territories. Mr. Goldthwaite also testified that he made a more detailed apportionment of the various types of distribution expenses after his exhibit was finished, which resulted in approximately \$3,000 more for New York city and correspondingly less for the Nassau county customers.

Customers' accounting and collecting expense was apportioned between New York city and Nassau county according to the ratio of active meters, after assigning \$1,000 to the Nassau and Suffolk Company and \$200 to Long Beach. The related payroll taxes were divided approximately in proportion to the expenses.

Sales promotion expenses and related payroll taxes were apportioned wholly to New York city and Nassau county on the basis of gas sold.

Administrative and general expenses, together with fixed charges on

## RE QUEENS BOROUGH GAS & ELECTRIC CO.

general property and general taxes other than earnings taxes, were divided among the three gas-using divisions in proportion to the preceding costs. Taxes based on earnings were apportioned according to the earnings applicable in each division.

The results obtained from the above apportionments may be summarized as follows:

Total costs for 1939 according to Mr. Hennessy .....	\$2,376,638
Items eliminated by Mr. Goldthwaite .....	21,515

Total costs apportioned .....	\$2,355,123
Attributed to subsidiaries .....	1,011,999
Attributed to New York city area .....	576,727
Attributed to Nassau county area ..	766,397

The revenues reported by the company during 1939 at the old rates, distributed according to the source from which they were received, were as follows:

Subsidiaries .....	\$691,107
New York city area .....	570,772
Nassau county area .....	723,354
Total .....	\$1,985,233

From the above, it appears that the subsidiaries paid <i>less</i> than the cost of service as apportioned by Mr. Goldthwaite to the extent of .....	\$320,892
The New York city area earned <i>less</i> than the allocated cost of the service by only .....	5,955
The Nassau county territory <i>failed to pay</i> the apportioned cost of service to the extent of .....	43,043

As these revenues represent what consumers would have paid *at the old rates* without any increase as proposed by the company, it is apparent that if this method is correct and the bases of apportionment are not erroneous—

(1) There is no justification for any increase in rates in the New York city territory. The deficiency is very small, only one per cent.

(2) The increase in Nassau county would be \$43,000 which is less than 6

per cent of the total revenues to general consumers instead of the average increase proposed by the company of nearly 13 per cent.

(3) The rates to the subsidiaries would need to be increased over 46 per cent or from 39.44 cents per thousand cubic feet of gas sold to 57.75 cents.

At this point one naturally asks what are the criticisms made of this method and the bases of apportionment. In the first place, the corporation counsel for the city of New York seemed to be quite satisfied with this testimony of Mr. Goldthwaite, but urged that the company could more wisely have purchased the gas needed for its own franchise territory and even its subsidiaries from the Brooklyn Union Gas Company. He endeavored to show from cross-examination of Witnesses Goldthwaite, Scharff, and Jeffs that the Brooklyn Union Gas Company was immediately adjacent to the territory, that main connections could easily be made and that as the peak load of the franchise territory of the Queens Borough Company (that is the area occupied by its own consumers) was in the summer, whereas the peak load of the Brooklyn Union Company was in the winter, that company could well afford to make a very low rate for the gas supplied to the Queens Borough for its own use, having an off-peak rate for general consumers of 35 cents per thousand. The city presented no witnesses to show how this could be carried out, what the results would be so far as the cost of service is concerned or just how the rates should be adjusted to recognize these factors. The testimony resulting from the cross-



## NEW YORK DEPARTMENT OF PUBLIC SERVICE

examination is too vague and indefinite to furnish a basis for definite findings or for lower rates. There may be something in the point but the record is not sufficient to make findings thereon.

Mr. Hertzoff apparently criticized the apportionment of 5,500,000 cubic feet of storage capacity to the franchise territory and only 2,500,000 cubic feet to Nassau and Suffolk Company service. He brought out that the total present storage capacity of the Queens Borough Company (8,000,000 cubic feet) was 61 per cent of the maximum daily demand in December, whereas the estimated maximum for general consumers alone was less than 5,000,000 cubic feet per day. He contended that 4,000,000 cubic feet is adequate for consumers but he produced no witness to support this figure.

In explanation of his allocation, Mr. Goldthwaite testified:

"I was not trying to determine what an appropriate holder capacity was at Inwood or Rockaway and it, of course, may be that the holder capacity there is excessive. I don't want to express an opinion on that point, but it did not seem equitable to me, so far as the usefulness of the existing holder capacity is concerned, to assign it to distant territory pro rata to the figures for the total system, simply because a holder becomes less useful the farther you separate it from its load, and it might well be that so far as my figures are concerned that there is twice as much capacity left for New York city and Nassau county as there ought to be.

"My estimate simply purports to indicate that a small relatively small

part of the holder capacity, namely, 2,500 out of 8,000 is actually useful in furnishing storage to the remainder of the system, and whether that storage in the system is excessive or deficient, I don't know."

Before leaving this method of apportionment, a few considerations should be mentioned. The method treats each one of the three classes of service as equally important and basic. No attempt is made to establish what would be the cost of service to the general consumers of the company if a system were provided merely for the purpose of supplying only the franchise territory and eliminating service to subsidiaries. If this were done, a supposititious plant would necessarily be considered as the production, storage, and transmission system of the Queens Borough Company would not need to be as large as at present. The distribution system might also be affected, and it is undoubtedly true that the administrative and general expenses, including the fixed charges under that heading in Exhibit 113, would be less than at present. There are no figures in the record to show directly what would be the cost of service under such conditions, but these are facts to be considered when one determines the weight of testimony to be given to the results shown by this method. The second method gives weight to these considerations and their effect will be evaluated later.

As to the bases used in apportioning the total costs to the three classes, there are a few points to be noted. It is asserted that Mr. Goldthwaite's method of allotting transmission costs places upon New York city customers a larger cost than is actually re-



## RE QUEENS BOROUGH GAS & ELECTRIC CO.

quired in view of the location of the Rockaway plant. The plant is located about in the center of New York city territory, but about 8 miles from the center of the Nassau county territory, about 9.5 miles from the holder of the Long Beach Company, and about 12 miles from the nearest point of the territory of the Nassau and Suffolk Company.

[7] If, therefore, the only transmission mains assigned to the New York city territory were those now used or needed to supply that territory, New York city consumers would be given the full advantage of the location of a production plant in their territory and the consumers in the Nassau county territory would be penalized because the plant had been located at a point distant from their area. To what extent the cost of service to both territories would be increased if the plant were located in Nassau county rather than the city of New York is most speculative. It does not seem fair in such a relatively small territory to give an area lower rates merely because it happens to be near the gas plant. New York city has heavily taxed the production plant and the increase in New York city taxes the last few years has been marked (Case 8403), 29 PUR(NS) 391. Under almost any system of apportionment, the burden of this additional taxation will not be restricted to consumers in the city of New York but will be passed on at least in part to consumers in Nassau county who receive no benefit whatever from the increased taxes imposed by the city of New York.

If the principle were to be recognized that consumers located near a

gas plant should have lower rates merely because of their location, it is obvious that the rates of all gas companies will have to be revolutionized. Obviously, the transmission of gas for long distances and the increased cost thereto cannot be ignored and one cannot lay down a general rule that plant locations should wholly be ignored and that rates should never be increased when transmission costs increase due to long distances. But in a relatively small territory such as that with which we are dealing, it is not just and reasonable to burden consumers located some distance from the gas plant in order that consumers located in another area shall have low rates merely because they are located near the plant.

It should not be inferred from the above comments that Mr. Goldthwaite in his apportionment of transmission costs gave New York city customers the full advantage of the location of the production plant. He definitely stated that such was not the case and that he did not believe that this should be done; and Mr. Hertzoff criticized his apportionment because it does not give New York city customers full advantage of location. In pressing his point, he brought out that the amount of gas sold in 1939 to New York city customers was 540,481 thousand cubic feet as compared with 668,553 thousand cubic feet in Nassau county territory and that Mr. Goldthwaite had apportioned the transmission costs almost equally between the two areas. Mr. Goldthwaite pointed out that transmission of gas to Nassau county customers is not exactly comparable to transmission to New York city customers, as the latter has a me-

## NEW YORK DEPARTMENT OF PUBLIC SERVICE

dium pressure transmission system to supplement the distribution system, whereas Nassau county has no such system.

Counsel for the company paid practically no attention to this method either as to its basic principles or its application.

### *Increment Cost Method*

As already stated, the first method used by Mr. Goldthwaite attempted to allocate total costs to the three classes of service according to their relative use. His testimony shows that he fully appreciated the fundamental character of the method and that in determining rates to be charged there were other considerations. The Nassau and Suffolk Company, if it were to follow its own interests, would not be obliged to purchase gas from the Queens Borough Company. There is at least one alternative, namely, the construction and operation of its own production plant and the development of a transmission and distribution system that would supply its own territory. If, with such system, service could be provided to its consumers at a lower cost than by purchasing gas from the Queens Borough Company at a price the latter could afford to charge, the Nassau and Suffolk Company would be in duty bound to construct and operate its own plant. Mr. Goldthwaite recognized these principles and expressed the opinion that the cost of gas to the Nassau and Suffolk Company under the apportionment cost method already described would be greater than if that company were to construct a plant of its own, provided the charge made to the Nassau and Suffolk Company were deter-

mined according to the methods he had followed.

Hence, in order to develop an opposite method, Mr. Goldthwaite proceeded to allocate costs on the increment cost basis, the fundamental principle being that the cost of service to the Nassau and Suffolk Company on that basis would be the *additional* cost which the Queens Borough Company would necessarily incur in order to supply the Nassau and Suffolk Company with the gas which is supplied.

In applying this method, which is neither new nor unique but is well known to experts, Mr. Goldthwaite envisaged a plant suitable solely for the gas supplied to the franchise territory of New York city and Nassau county. The first effect he found would be an increase in production expenses of about 1.5 cents per thousand cubic feet compared with the actual production expenses at the Rockaway plant in 1939. This differential is the same as used by the company in Exhibit 59.

In order to determine fixed charges (depreciation, taxes, and return), Mr. Goldthwaite estimated that a plant to supply only the franchise area would have a peak load of about 37 per cent of the actual peak of the Rockaway plant in 1939. It has already been stated that the load actually attributable to the subsidiaries in December, 1939, at the time of the maximum send-out was 68.3 per cent, leaving 31.7 per cent as the amount attributable to the franchise territory. In the first method in allocating fixed charges on the production plant, Mr. Goldthwaite finally used 35 per cent as the proper proportion for the franchise

## RE QUEENS BOROUGH GAS & ELECTRIC CO.

territory. Thus, in establishing 37 per cent of the actual peak as the peak load which would apply to the franchise territory under the increment method, he allowed somewhat more than either of the above figures.

Mr. Goldthwaite also estimated that the plant would have cost approximately 60 per cent of the original cost of the Rockaway plant and he divided such cost between the two areas according to the same general method that he used in determining the relative proportions of the fixed charges on the production plant under the first method.

The situation changes entirely when one considers only the amount of gas generated and sold in the franchise territory. For the entire present output, the maximum simultaneous demand occurs in the winter, but for the franchise territory *only*, the maximum demand occurs in the summer. At that time, the simultaneous demand ratios are 63.5 per cent for the New York city area and 36.5 per cent for Nassau county. The non-simultaneous ratios determined in the same manner as in the first method are 52.5 per cent and 47.5 per cent respectively. Averaging the two demands and rounding off the figures as before, Mr. Goldthwaite reaches the resultant figures of 58 per cent for New York city and 42 per cent for the Nassau county territory, and the total fixed charges were distributed between the two areas upon this basis.

As a result, the complete production cost of the gas supplied to New York city was increased \$55,500 over the cost obtained in the first study, and \$21,000 for Nassau county. The cost to the subsidiaries was reduced by the

total of these two figures—\$76,500.

In his analysis of transmission costs, Mr. Goldthwaite considered that the 16-inch transmission line running northeasterly from the Inwood holder and continuing as a 12-inch line to the Nassau and Suffolk Company connection was specifically to supply gas to that company. (There is no explanation why a 16-inch line is necessary part way, for the capacity of the line is determined by the 12-inch part.) To the original cost of this main, he added the part of the 16-inch line from the Rockaway plant to the holder which was assigned in the first method to subsidiary service. He then found the accrued depreciation on this property according to the determinations made by the Commission in the original case. Having thus obtained the value of the transmission property attributable to subsidiary service, he compared it with the value of the property assigned in the first study and found a decrease of approximately \$160,000. The smaller figure represents Mr. Goldthwaite's estimate of the amount of transmission property which the company had to provide in order to serve the Nassau and Suffolk Company in addition to the amount of property which the company would have needed had it not served that company.

Reducing the charges proportionately, Mr. Goldthwaite found that transmission costs to subsidiaries should be reduced \$32,000 and the costs to the Nassau county area increased by the same amount. In doing so, he assigns to Nassau county a large transmission system which has been provided because the Rockaway plant is located so far from Nassau county.

## NEW YORK DEPARTMENT OF PUBLIC SERVICE

In the discussion of the first method used by Mr. Goldthwaite, it was pointed out that to give the New York city area the advantage of a production plant located practically in its midst and to burden the Nassau county area with all of the costs which would result from the plant being located so far distant was not fair or reasonable. In this method, Mr. Goldthwaite has, in our opinion, charged too much to the Nassau county territory and favored to an undue extent the New York city area.

Mr. Goldthwaite made no changes in distribution, customers' accounting, and collecting and sales promotion costs in this study compared with the figures set forth in the first method.

When Mr. Goldthwaite came to consider administrative and general costs, he noted that in the first study such costs as he had allocated were about 13 per cent of all other costs (production, storage, transmission, distribution, etc.). On an increment cost basis, the general consumers of the company would have to provide the basic administrative and general costs and sales to subsidiaries would add a very much smaller amount than the first method produced. About one-half (\$60,300) of the administrative and general costs in the first study was transferred from the subsidiaries to the franchise territory, and he distributed this amount between the two areas in proportion to the basic costs apportioned to each area.

In his cross-examination of Mr. Goldthwaite, counsel for the company attempted to develop the contention that the administrative and general costs assigned to subsidiary service were excessive, but as Mr. Scharff

in his exhibit had allocated over \$56,000 to the same service, almost the same figure that Mr. Goldthwaite obtained, nothing was said about this point in the brief and there is no reason for discussing the point in which counsel was not supported by his own witness.

The results obtained on the increment cost basis may be summarized as follows:

Total costs apportioned .....	\$2,355,123
Attributed to subsidiaries .....	\$843,199
Attributed to New York city area .....	658,527
Attributed to Nassau county area .....	853,397

Using the same revenues as in the first study for the various classes of service, it appears that the subsidiaries paid *less* than the cost of service as apportioned by Mr. Goldthwaite to the extent of \$152,092; that the New York city area contributed *less* than the cost of service in the amount of \$87,755; and that the Nassau county territory failed to pay the cost of service to the extent of \$130,043.

As the revenues used in these calculations were those at the old rates, it is apparent that on the average the rates charged to the various classes of service would need to be increased by the following percentages if each service were to pay the costs as computed by Mr. Goldthwaite under the increment cost method:

Subsidiaries .....	22 per cent
New York city area .....	15.4 per cent
Nassau county area .....	18 per cent

The rate charged subsidiaries would need to be about 48.1 cents as compared with 39.44 cents per thousand cubic feet actually charged in 1939.

### *Comparative Results*

Summarizing the results of the two

## RE QUEENS BOROUGH GAS & ELECTRIC CO.

studies made by Mr. Goldthwaite and the figures submitted by Mr. Scharff which have already been discussed, one obtains the following comparisons as to the extent to which the service to subsidiaries was rendered at *less* than cost:

Mr. Goldthwaite's apportionment method .....	\$320,892
Mr. Goldthwaite's increment cost method .....	152,092
Mr. Scharff's method .....	135,000

It is essential to note that when the company filed rates increasing general consumers about 13 per cent on the average, it made no attempt to charge subsidiaries more. Indeed in 1939 it reduced the rates to subsidiaries, *and the reduction was made after Mr. Scharff gave his testimony showing that the subsidiaries were served at less than cost to the extent of about \$135,000.* Mr. Carpenter has claimed throughout that the rates charged to subsidiaries have been reasonable; and notwithstanding Mr. Scharff's testimony, the company has not so far as the record shows made any attempt to increase the rates to subsidiaries to cover the cost of service.

We are not fixing here the rates to subsidiaries. The record is not sufficiently complete to determine what the Queens Borough should charge and what the subsidiaries could afford to pay compared with the cost of operating a separate plant. The data regarding the Nassau and Suffolk plant—its cost, value, efficiency, adequacy, etc.—are not in this record. But it is very significant that Mr. Goldthwaite, even upon the increment cost basis, finds that the subsidiaries, upon the basis of 1939 costs, are paying \$152,000 less than the increment cost of the gas supplied.

It is also important to note that on the basis of Mr. Hennessy's figures, which purport to bring the findings of the Commission in the original case regarding original cost and accrued depreciation down to the end of 1939 and also to adjust the operating expenses in accordance with the findings of the Commission, the deficiency below a 6 per cent return from the sale of gas is \$379,422 (computed from Exhibit 113). If the company had collected all of the cost of service from the subsidiaries and from the merchandising and jobbing business, according to the apportionment method of Mr. Goldthwaite, the amount to be collected from general consumers in the New York city and Nassau county areas would be only about \$49,000 and the increase in rates of 13 per cent or about \$150,000 would not be justified.

According to the increment cost study of Mr. Goldthwaite, the subsidiaries paid less than the cost of service to the extent of about \$152,000, and the rates in the franchise territory would need to be increased in order to cover the cost of this service to the extent of about \$218,000, which is in excess of the increase asked for by the company, that is, in excess of what the new rates which were filed and allowed to become operative were estimated to produce.

It is apparent, therefore, that the justification of the proposed rates, *so far as the total increased revenue is concerned*, depends principally upon the methods used in distributing the various items entering into the cost of service between the various classes of consumers and between the rate classifications.



## NEW YORK DEPARTMENT OF PUBLIC SERVICE

### *Objections of Counsel*

The corporation counsel of the city of New York objected strenuously to the increment cost method, both as to the theory and its application. He contends that many difficulties lie in the path of the construction of a production plant to supply the Nassau and Suffolk Company with all of the gas that it needs for its own consumers and which it sells to the Long Island Lighting Company, that an expenditure of \$595,700 would be necessary to improve the Nassau and Suffolk plant, that the Queens Borough plant would be able to operate more economically and that consequently what the Nassau and Suffolk Company could afford to pay and should be charged is more than the increment cost of the service computed by Mr. Goldthwaite. He also calls attention to the fact that the production expense of the Queens Borough Company in 1939, as reported to the Commission, was 29.55 cents per thousand cubic feet compared with 38.86 cents per thousand cubic feet for the Nassau and Suffolk plant. But if nearly \$600,000 were spent in modernizing and extending the Nassau and Suffolk plant, it seems readily apparent that such a large difference would be considerably reduced at least.

He also criticizes Mr. Goldthwaite's estimate that a plant having 37 per cent of the present maximum demand would cost 60 per cent of the original cost as found by the Commission. He brought out on cross-examination that if the cost of the present production plant be divided by a daily capacity of 15,450 thousand cubic feet, one obtains an average figure of \$141 per

thousand cubic feet and that if the cost is divided by the peak demand in 1939 of 13,083 thousand cubic feet, the average figure obtained is \$167, whereas upon the basis of the supposititious plant, the estimated maximum demand would be \$270 per thousand cubic feet. Mr. Hertzoff maintains that these figures show that the 60 per cent estimate is unreasonable, but Mr. Goldthwaite replied that his estimate was based on the existing plant and that of course one might build a plant today which would be more efficient and more economical, but that he would hardly be justified in disregarding actual figures as compared with purely theoretical ones.

Mr. Hertzoff also criticized the higher estimated production cost assigned to the franchise area of 1.5 cents, maintaining that new plants would be more efficient than existing plants, to which Mr. Goldthwaite agreed. But it is to be observed that if a new plant were built, it is probable that the cost of such plant would exceed the original cost less depreciation and that economies of operation which would be obtained with a new plant would be offset in part by a higher return. However, Mr. Hertzoff presented no testimony on any of the points for which he contended.

Mr. Hertzoff also made the same criticisms of the allocations made by Mr. Goldthwaite in regard to storage costs and transmission costs that were outlined in the discussion upon Mr. Goldthwaite's first method.

Counsel for the company seems better satisfied with the results obtained by Mr. Goldthwaite under the increment cost method than under the apportionment method. Perhaps the



## RE QUEENS BOROUGH GAS & ELECTRIC CO.

comparisons already made indicate the reasons for his position. He states in his brief:

"The company does not care whether the figures of one or the other (Goldthwaite or Scharff) are adopted, for it makes no difference as to the issues here. *The fundamental fact is that the testimony of both experts conclusively shows that, under the new effective rates, the company fails to receive from consumers in both the New York city and Nassau county areas, either separately or collectively, an amount sufficient to cover the cost of rendering service to them.*"

So far as Mr. Goldthwaite's first (apportionment) method is concerned, the statement is far from correct. As already pointed out, Mr. Goldthwaite's first method shows that the old rates produced in 1939 in New York city practically enough to pay all costs including a 6 per cent return upon the rate base submitted by Mr. Hennessy, a company witness, whereas Mr. Scharff in his Exhibit 112 finds that in 1938 the New York city area failed to pay costs to the extent of \$94,617. For Nassau county, the difference between the two experts is even greater. Mr. Goldthwaite's first allocation shows that Nassau county failed to pay operating expenses and a 6 per cent return to the extent of \$43,043, whereas Mr. Scharff in Exhibit 112 shows a deficiency of \$193,696.

It is true that Mr. Scharff used 1938 figures and Mr. Goldthwaite 1939 figures. The report for 1939 definitely indicates that the results showed a better return in that year than in prior years; but as between the two, one would naturally use the later

period as more indicative of current and probable future results.

Comparing Mr. Scharff's result with Mr. Goldthwaite's second (increment cost) method, it appears that as to New York city the results are not far apart. Mr. Goldthwaite finds an excess of costs over the old rates of \$87,755, whereas Mr. Scharff's deficiency as already stated was \$94,617. In the case of Nassau county, Mr. Goldthwaite's deficiency is \$130,043, whereas Mr. Scharff contends that the old rates were deficient to the extent of \$193,696.

[8] The increment cost method when properly applied establishes the minimum price for service. No company would be justified from an economic viewpoint in supplying any of the three classes of service here being considered unless that class paid at least the *additional* cost of rendering such service. If a company charged less than such cost and other classes were required to make up the deficiency, they would be burdened unjustly. No company would be justified in taking on additional business unless that business paid more than such increment cost fairly determined.

But the fundamental difficulty with the increment cost basis is—What classes of service must bear the basic cost and what are to bear only the increment cost? The consumers in each class of service will naturally insist that their service should be billed on the increment cost basis, for they would thus obtain lower rates than could possibly be obtained on any other cost basis. Obviously, it is impossible to treat all classes of service on an increment cost basis and the tendency

## NEW YORK DEPARTMENT OF PUBLIC SERVICE

always is to make those consumers who are virtually forced to take a utility service and cannot escape by using substitutes pay the basic costs. This means that small consumers and users of small means are required to bear the heavy part of the load while large consumers and users of large means are allowed to escape on the increment cost basis.

In my opinion, rates should not be fixed in this case solely according to the increment cost method or the apportionment method used by Mr. Goldthwaite. Many of the underlying facts and allocations suggested by him will serve as a basis for rate making. Neither Mr. Goldthwaite nor Mr. Scharff suggested a rate schedule and the prior memorandum set forth the reasons why none of Mr. Carpenter's schedules could be accepted, no one of them being supported adequately by testimony. It becomes necessary, therefore, to examine the underlying facts used by Mr. Goldthwaite and Mr. Scharff and to ascertain whether there is an adequate basis for the establishment of a rate schedule as insisted upon by the city of New York.

### *Summer Rates*

[9] In certain respects, the New York city area differs considerably from the Nassau territory. Usually, a gas company has a peak demand in the winter, generally near the end of December or early in January. This is true of the Nassau area but in New York city the peak is in the summer and that peak is relatively very important. Exhibits 106 and 107 were prepared by the company to show these facts. The diagrams indicate a rather uniform consumption through-

out the year in the Nassau county area with a present trend towards a greater variation in consumption between the winter and the summer. The line representing the consumption in New York city clearly indicates a sharp peak in the summer months with small variations the rest of the year. The line for the total consumption of the company indicates that the peak for the system falls in the summer months. Comparing recent years with prior years, it appears that the increased consumption in the summer months is relatively less than in the years from 1929 to 1933.

The consumption in New York city during 1939, month by month, is shown in Table I. In the peak month (August), the amount of gas sold was about two and a half times the amount in the minimum month (October)—a most unusual condition. The number of active meters during the summer peak months was over twice the number in the winter.

*Table I—Monthly Sales to General Consumers in New York City, 1939*  
(M cubic feet)

January .....	40,560.8
February .....	39,319.6
March .....	36,162.6
April .....	36,942.9
May .....	34,016.7
June .....	41,738.8
July .....	64,224.8
August .....	78,906.4
September .....	66,877.1
October .....	32,241.3
November .....	32,544.9
December .....	36,945.5
Total .....	540,481.4

In Nassau county, the variation between the minimum month (August) and the maximum month (January) was only 48 per cent of the former.

The combined sales for the entire com-

## RE QUEENS BOROUGH GAS & ELECTRIC CO.

pany show a 52 per cent excess in the peak month (August) over the minimum month (November). The sales for Nassau county are shown in Table II.

*Table II—Monthly Sales to General Consumers in Nassau County, 1939*  
(M cubic feet)

January .....	66,977.6
February .....	64,529.8
March .....	63,455.5
April .....	57,699.4
May .....	53,125.5
June .....	50,256.8
July .....	47,284.1
August .....	45,317.8
September .....	48,044.2
October .....	49,384.2
November .....	57,590.2
December .....	64,887.5
Total .....	668,552.6

These facts have an important bearing upon the rates to be charged, for the summer customers determine the plant requirements and the system must be designed and gas produced to render adequate service at times of peak consumption and not for minimum requirements or even for average requirements, the amount of gas that can be stored being relatively small.

Plant requirements affect not only investment but maintenance, depreciation, and taxes. Fixed charges on enlarged plant should in reality be borne by the summer customers who are responsible for their existence. In Nassau county, because of the more uniform load, return, depreciation, and taxes on the entire system can be spread almost uniformly over twelve months. The same charges on plant required to serve the summer customers only should be spread over a short period, unless the year-round customers are required to contribute more than the cost of service to them.

The conditions described also have an effect upon operating expenses, because provision must be made for a larger number of employees to serve the great influx of customers in the New York city territory. In Nassau county, as the number of customers is almost uniform, the staff required is practically constant throughout the year.

If one is to recognize the additional burden imposed on the company through increased operating expenses and fixed charges to serve the summer business, there should be a substantial difference between the cost of service to consumers who are served throughout the year compared with those who take service only during the summer months.

As the exhibits show (89, 90, 106, and 107), there are no sharply defined limits to the summer season. In the city of New York, the minimum number of active meters is generally in January or February. There is an increase in April although not large. The first substantial increase comes in May, which is exceeded in June and the peak is reached in July and August. There is a sharp decline by the end of September and by the close of October normal conditions for the winter period have nearly been reached.

The figures for gas consumption are somewhat different, for the amount of gas used for house heating generally is much larger in the winter, and it falls to practically nothing during the summer months. There are no separate figures for house heating in the New York city area, but the figures for total sales have already been given (Table I).

## NEW YORK DEPARTMENT OF PUBLIC SERVICE

Considering all the facts, I conclude that there should be a substantially higher rate for gas during the summer season and that such summer season for the purposes of this case should be considered as beginning about June 1st and ending with September.

### *Initial Block—Minimum Bill*

[10-12] The company's old and new rates are in each case block rates beginning with an initial block and a minimum bill. Under the old general service rates, the initial block contained 300 cubic feet or less for 48 cents. The minimum bill was made 75 cents per meter per month. Thus a consumer could use up to 525 cubic feet each month for which he would pay 75 cents.

The new general service rate provides for a first block of 500 cubic feet for \$1. Thus, the minimum charge was increased 25 cents and the amount of gas that could be used for the minimum charge reduced.

Under the house heating rate, there was no charge in the initial block, the old and new rates uniformly providing for the use of 500 cubic feet or less for a minimum charge of \$1.

There is no apparent factual basis in the record for the marked difference in the old rates for the initial block. There is certainly no material difference in the so-called "customer costs" or in the cost of the gas supplied, particularly in view of the fact that when a consumer uses gas for house heating, the gas used for cooking and other general purposes is billed at the house heating rate. There is only one meter.

As service charges are prohibited

by law (Public Service Law, § 65, par. 6) and as the present Commission has uniformly favored the minimum bill form of rate for which the consumer is allowed to use a specified amount of service, the first question to be considered is the amount of such minimum bill and the amount of service to be afforded.

*Table III—Selected Costs per Bill, 1939*

Distribution	New York city	Nassau county
(1) Removing and resetting meters .....	\$ .071	\$ .017
(2) Services on consumers' premises .....	.070	.071
(3) Other operation and maintenance .....	106	.075
(4) Depreciation .....	.060	.049
(5) Taxes .....	.030	.028
(6) Return .....	.098	.088
Total .....	\$ .435	\$ .328
Customers' accounting and collecting		
(7) Operation .....	\$ .295	\$ .295
(8) Taxes .....	.008	.008
Total .....	\$ .303	\$ .303
Administrative and general		
(9) Operation and mainte- nance .....	\$ .076	\$ .066
(10) Depreciation .....	.009	.008
(11) Taxes—other than earnings .....	.009	.008
(12) Return .....	.028	.024
Total .....	\$ .122	\$ .106
(13) Taxes—on gross earn- ings .....	\$ .026	\$ .015
Total .....	\$ .886	\$ .752

In any gas system, there is only a small amount of property that can be considered as individualized. Except in unusual cases, the only part of the system that is used to serve one consumer exclusively is the meter and the service where there are single family houses. Where the building is occupied by more than one family, the service from the main to the point

## RE QUEENS BOROUGH GAS & ELECTRIC CO.

where it is connected with the house piping is used jointly. Where there are single houses at the end of a main system, there may be a small length of main which is used for only one consumer, but it is relatively such a small part of the system and so unusual that it may be disregarded.

Consideration of the various cost elements indicates that there are certain elements which are largely unaffected by the amount of gas consumed and other elements that vary almost directly with the consumption. The size of the meter and service is principally determined by the maximum demand, that is, each must be of a sufficient size properly to supply and measure gas when the demand is at the peak; but the variation in the size of the meter and the service for household and commercial users in this case is not of great importance.

In Table III, there have been tabulated for each of the areas here being considered for the year 1939, the *average cost per bill* for each of the items there shown which are affected to a relatively small degree by the amount of gas consumed.

The cost of removing and resetting meters, which principally consists of locking and unlocking meters left in place, was computed by taking the average cost per operation and then multiplying it by the number of such operations in each territory during the year. The resultant figure was divided by the number of bills rendered during the year. It may be that in using an average figure, the amount attributed to the New York city area is larger than it should be, for the Nassau county territory is more scattered which would produce an average

higher cost. The exact figures are not available. The marked difference in cost per bill between the two areas (5.4 cents) is due to the large number of summer users in New York city.

With this one exception, there is no adequate recognition in these figures of the larger cost due to the large influx of summer consumers in the New York city territory. There the demand in summer is greatly in excess of the winter peak contrary to usual practice, and it is well known that certain costs of handling an increased number of consumers during a peak period is more than for a uniform, regular load. The difference between the two areas is shown in Table IV. The number of active meters in August in New York city is over twice the number from November to March. In Nassau county, the peak month (August) exceeds the lowest month in the winter by only about 1,200 meters or 6 per cent.

*Table IV—General Consumers—Active Meters at End of Month, 1939*

Month	New York city	Nassau county	Total
January	10,255	19,613	29,868
February	10,251	19,632	29,883
March	10,481	19,744	30,225
April	11,415	20,013	31,428
May	14,666	20,279	34,945
June	18,754	20,450	39,204
July	20,818	20,570	41,388
August	21,205	20,823	42,028
September	13,507	20,767	34,274
October	11,223	20,695	31,918
November	10,585	20,588	31,173
December	10,388	20,539	30,927

The second item in Table III is likewise computed on an average cost basis and the comments made as to the preceding item apply.

The figures for depreciation and return (items 4 and 6) were computed upon the original cost of the meters



## NEW YORK DEPARTMENT OF PUBLIC SERVICE

and services in the two areas divided by the number of bills.

The taxes apportioned (item 5) consist principally of the franchise taxes levied on the company's property in the streets, the tax being divided between the service and the main on the basis of the original cost of the property.

Item 7 covers the operating expenses for reading meters, keeping accounts, and collecting bills, the total cost being divided by the number of bills. The comments made on item 1 apply.

Item 8 represents charges computed on the payroll and is subject to the comments already made.

Administrative and general expenses are prorated according to the relation of the preceding costs to the total costs.

The difference between the two territories on gross earnings taxes is due to the fact that higher taxes are levied in New York city than in Nassau county, certain of the Nassau county municipalities not having exercised full authority to levy taxes conferred by the legislature.

When considering the results shown in Table III (88.6 cents per bill for New York city and 75.2 cents per bill for Nassau county), two important factors are to be considered. In view of the facts mentioned above, it is not believed that there is a difference of 13.4 cents between the correct and comparable figures for the two areas; the average for New York city should be reduced and that for Nassau county increased.

When considering the costs applicable to year-round customers as compared with summer transients, there

is a further adjustment to be made. In view of the small difference in the number of customers (active meters) in the winter and summer months in Nassau county, the average figures shown in Table III, if adjusted as just described, substantially represent the costs for year-around customers in that area. This cannot be said regarding the figures for New York city. For example, in the preparation of the six items for depreciation, taxes and return (items 4-6 and 10-12), the gross amounts have been divided by the number of bills. Thus, in the case of depreciation on the distributing property dealt with in the table, a four-months' user incurs a charge of 24 cents, whereas a year-round user is charged with 72 cents. Yet the depreciation for the two customers is practically the same, as depreciation accrues even though property is not being used.

Some measure of the importance of these factors can be approximated by assuming that all of the summer customers were year-round customers. If that is done the total costs in Table III for the six items mentioned will be reduced from 23.4 cents per bill to 15.8 cents per bill—a reduction of 7.6 cents.

Attention has already been called to the difference of 5.4 cents per bill for locking and unlocking meters. Adding this to the figure just given produces a correction of 13 cents, which together with the correction mentioned above, would reduce the average selected costs for year-round customers to about 72 cents per bill in New York city and 78 cents in Nassau county.

Perhaps a few words should at this

## RE QUEENS BOROUGH GAS & ELECTRIC CO.

point be said regarding the testimony of Mr. Scharff on "customer costs." His figures are considerably different from those given in Table III.

Mr. Scharff asserted that his "customer costs" were only those costs "which are directly proportional to the number of customers and more or less independent of the quantity of gas sold or the size of capacity of the production, transmission, and distribution system." But later it developed that his allocations were not as clear-cut as they might seem at first sight. On being questioned he stated that as to the charges for the service and meter "it seems that there is good reason in such a study because they are more or less exclusively for the use of the particular customer and are, therefore, it seems to me, a logical part of a customer cost calculation." It was pointed out, however, that customers living in apartment houses (of which there are many) would have no exclusive use of a service but only of a meter. Upon being asked whether he thought it a sound principle to draw the line for customer cost on the basis of what is exclusively used, *he replied in the negative*. It was also brought out that the customer cost for residents of apartment houses is relatively low; hence the average cost used by Mr. Scharff would constitute to some extent a disproportionate burden.

Stating that he did so at the request of counsel rather than on his own volition, Mr. Scharff introduced modifications of his customer costs and commodity costs in Exhibit 77. In customer cost, he added a proportion of general expense, fixed charges on general property and working capital,

and operating expense, maintenance, and fixed charges on mains.

The operating expense and maintenance of distribution lines apportioned to customer cost was based on 25 feet of 2-inch wrought iron or wrought steel main per customer plus a portion of paving costs. The fixed charges on the depreciated cost of this amount of main and paving was also assigned to customer costs. This amount of main was apparently chosen as representative of a minimum amount of distribution main per customer, although the basis for this belief was somewhat vague. When asked how he got 25 feet, Mr. Scharff stated that the total feet of mains (of all sizes) in the distribution system, divided by the average number of bills, indicated an average of about 50 feet of main per customer, and that it seemed to him that "with customers located in some sections on both sides of the street and in other cases grouped in apartment houses, an average of one-half of that was a reasonable figure to use." In Exhibit 77, Mr. Scharff used a new set of estimated demands for different blocks of consumption, testifying that these were arrived at "by smoothing a curve from the demands assumed in the previous exhibits for large groups of consumption or demand."

In his earlier exhibits, Mr. Scharff set up tables of calculated costs of service both for general service and heating service, although these costs were identical in most instances. In his Exhibit 77, however, he makes no distinctions at all for such types of service, and testified that he made no studies to ascertain to what extent the

## NEW YORK DEPARTMENT OF PUBLIC SERVICE

cost of service varied from one service classification to another.

Mr. Scharff's new exhibits, like the old ones, depend upon various elements of cost of service that were furnished him by company employees rather than definitely being ascertained by him. He has added nothing to prove that the fixed charges he uses are correct or that his apportionments of expenses and fixed charges between companies or between blocks of consumption are sound and desirable.

The costs of service for the different blocks of consumption given in Exhibit 77 are quite different from the corresponding revenue per block under the old rates, and they are also quite different from the corresponding revenue under the new rates; and there is no uniform relationship. The sum of the customer cost and commodity cost as defined and computed by Mr. Scharff is covered by the revenue from the new rates for all ten blocks of consumption used by Mr. Scharff, the amounts showing a great variation. The total cost of service, however, in some cases is higher than the revenue from the new rate and in other cases lower, and as the blocks increase in size this relationship varies quite irregularly.

The revenues under the new rates for Service Classification No. 3 (heating service) are shown as falling below the cost of service in every instance but one of the thirty that are shown on the three sets of charts in Exhibit 77. The revenue from Service Classification No. 1 (general service) under the new rates, however, fluctuates back and forth between points below and above the computed cost for the various blocks.

It is argued that so-called "customer costs" do not vary according to the amount of gas consumed, that therefore the small user or the initial block in the rate schedule should bear the entire burden, and that no part should be included in the cost of gas as distinguished from the costs included in Table III or the "customer costs" of Mr. Scharff.

This theory is so contrary to price fixing in general practice that it cannot be accepted. The only companies that are able to collect such a charge are those which have a virtual, if not a legal, monopoly and those in which the customer has no choice but to take service from the company which provides the physical connection. No store or shop in competitive business can say to a customer: "Pay me so much a month whether you purchase any of my commodities or not."

It may be said by a shopkeeper that many of his expenses are fixed regardless of the amount of business done. Stores and shops must be kept open long hours regardless of number of customers or sales, but there is no variation in price dependent upon the time of purchase.

It is our opinion that all of the costs here being considered should not be covered by the initial block, that part should be spread over the other blocks and be represented in the price of the commodity. No generally accepted principle has yet been evolved according to which these costs should be allocated between the various blocks. Some allocation must be made and after considering various suggested plans, it is our opinion that an amount not to exceed one-half of these costs should be charged to the initial block

## RE QUEENS BOROUGH GAS & ELECTRIC CO.

and one-half spread over the remaining blocks.

The determination of the amount of gas which should be supplied in the first block or for the minimum bill depends upon a number of general considerations. There are no absolute rules or principles of a specific character but there are general factors to be recognized.

In the first place, it must be a substantial amount and not so small that it becomes a violation of the statute which prohibits service charges. One hundred or two hundred feet would obviously be an evasion of the statute.

Secondly, the Long Island Lighting Company and the Nassau and Suffolk Lighting Company have a present initial block of 400 cubic feet for 80 cents, although the minimum charge in each case is \$1.

Thirdly, I have concluded that there should be a seasonal rate, that customers who take service during only a part of the year and cause a peak plant and consumption in the summer should pay a higher rate than year-round consumers. Under that plan, any consumer who wishes year-round service may pay the minimum charge during the off-season months. But in order to permit this to be done and thus save the expense of disconnecting and reconnecting meters, the minimum bill should not be so large as to impose an undue penalty upon such class.

I conclude, therefore, that under the facts of this case, the first block should contain 400 cubic feet for the entire territory.

We come now to discuss the rate at which 400 cubic feet should be includ-

ed in the first block for year-round customers. In the old rates, the rate in the next block was \$1.20 per thousand cubic feet under General Service Classification No. 1 and \$1.10 for the heating load. The proposed rates use a uniform rate of \$1.30 per thousand cubic feet—an increase in one case of 10 cents per thousand and in the other of 20 cents per thousand.

There is nothing in the record which would indicate that the rate in the second block or the rate for computing the charge in the first block for the gas supplied should be different in the two classifications in the same area, particularly when it is considered that a consumer taking gas for house heating is able to purchase at the one rate gas used for cooking, lighting, and general purposes.

Further, there is nothing in the record which shows that according to any analysis of costs, the rate in the initial block should be \$1.30 as compared with \$1.10 and \$1.20 in New York city. Using the maximum of the two old rates, 400 feet would produce a charge of 48 cents, which together with about one-half of the costs analyzed gives a minimum charge and a rate for the initial block of nearly 85 cents for New York city for year-round customers.

In the discussion of commodity costs, it will be shown that there is between New York city and Nassau county a differential of about 5 cents per thousand cubic feet of gas sold. At \$1.25 per thousand, 400 feet would produce a charge of 50 cents and a rate for the initial block in Nassau county of practically 90 cents.

The initial block for summer customers in New York city should be

## NEW YORK DEPARTMENT OF PUBLIC SERVICE

substantially higher—25 to 30 cents more than the initial block in the year-round rate in New York city. As there is a small increase in the number of consumers in Nassau county in the summer months and as their consumption does not add to the peak on the transmission and distribution system provided for Nassau county, no summer rate is now recommended for that territory. Should conditions materially change, it may be necessary to make a summer rate applicable to the entire territory.

### *Additional Blocks*

[13-15] In the formation of a block rate, which is the form of rate which has been in effect in this territory and has been approved by the Commission in many instances, two matters to be determined are the size of the various blocks and the rate for each block. In order to afford easy comparison, it seems desirable to use the same block divisions throughout the territory and in all of the rates. That is not the present or past practice of the company, but no good reason has been offered why block uniformity should not be adopted.

In the formation of any rate schedule, it is important that there shall be no marked changes in the rate curve at any one point. It is undoubtedly true that the cost of supplying an additional amount of gas to each consumer decreases per thousand cubic feet as the amount of gas consumed increases, and the general principal applied to ordinary conditions is to produce a logical rate curve with no humps or valleys—no abrupt changes—as there are no abrupt changes in the cost of service.

In the proposed rates, the company suggests a second block of 2,500 cubic feet under S. C. No. 1 and a block of 2,000 cubic feet in the heating rate. The average consumption in this territory is about 2,600 cubic feet per month and it seems logical that the first two blocks (including the initial block) should be approximately equal to the average use.

As the meters are read only in even hundreds, no blocks should have odd hundreds. Following a common practice to produce a smooth rate curve, I recommend

For the second block .....	2,200 cu. ft.
For the third block .....	2,400 cu. ft.
For the fourth block .....	5,000 cu. ft.
For the fifth block .....	10,000 cu. ft.
For a final block—	

All consumption in excess of 20,000 cu. ft.

In determining the rates for the various blocks, several considerations should be recognized. In the first place, the costs set forth in Table III which were not covered by the initial charge must be recognized. As their relative importance decreases as the amount of gas consumed increases, the amount included in the price per thousand cubic feet in each block should gradually decline until in the last block no such costs should be included. In other words, in the last block, the consumer pays only a commodity cost.

The principle should also be recognized that increased output is supplied at a declining cost and that the commodity cost per thousand cubic feet in each of the blocks should gradually decline.

In fixing the lower limit to be reached in the largest block, consideration has been given to the fact that in the proposed rates the company it-



## RE QUEENS BOROUGH GAS & ELECTRIC CO.

self suggested 70 cents per thousand cubic feet in S. C. No. 1. It is true this rate was to be reached only when a consumption of 30 thousand cubic feet had been exceeded in a month. In view of the introduction of a seasonal rate, it is considered reasonable to reduce the point which must be exceeded to obtain the low rate from 30 thousand cubic feet to 20 thousand cubic feet. Thus, the rates to year-round customers in the city of New York should be as follows:

First	400 cu. ft. or less	\$.85
Next	2,200 cu. ft. ....	1.20 per M cu. ft.
Next	2,400 cu. ft. ....	1.05 per M cu. ft.
Next	5,000 cu. ft. ....	.90 per M cu. ft.
Next	10,000 cu. ft. ....	.80 per M cu. ft.
Excess of 20,000 cu. ft. ....		.70 per M cu. ft.
Minimum bill \$.85 per month.		

The additional blocks for seasonal customers have been obtained in the same way, except that the rate starts with a minimum or initial block of \$1.10 and ends with the charge of 85 cents for all gas consumed in excess of 20 thousand cubic feet per month. It will be noted that the minimum spread in the various blocks is 15 cents per thousand cubic feet, which includes not only the difference in the so-called customer costs but also the difference in the cost of serving the commodity during a short period at the peak of the load.

The summer rates recommended are as follows:

First	400 cu. ft. or less	\$1.10
Next	2,200 cu. ft. ....	1.35 per M cu. ft.
Next	2,400 cu. ft. ....	1.20 per M cu. ft.
Next	5,000 cu. ft. ....	1.05 per M cu. ft.
Next	10,000 cu. ft. ....	.95 per M cu. ft.
Excess of 20,000 cu. ft. ....		.85 per M cu. ft.
Minimum bill \$1.10 per month.		

[16] In the preceding analysis of the facts upon which a seasonal rate for summer customers has been rec-

ommended, the period specified was from June 1st to September 30th. Customers who are served throughout the year should not pay the higher rates and any customer who has not received service for a completed year should pay the rate specified for the period, month by month until the year is completed. When he has completed a full year, his bills should be refigured and a refund or credit made for the amount he has paid during the summer months at the higher rates. In order to obtain the lower rates during the summer months, he must have been a customer for at least one year; and if no gas is consumed in any month, he must pay the minimum charge in order to avoid paying the higher rates during the summer months.

[17] In fixing the heating rate, consideration was first given to the fact that if a consumer uses gas for space heating, he will pay for gas used for cooking at the heating rate. Consequently, it seemed proper that up to the average usage the rate should be the same for the year-round customer and for the heating customer. In the blocks beyond average consumption, the rate should decline and the consumer who uses gas for hot water heating should receive a substantial advantage.

In the company's proposed rate schedule and in its old schedule, the heating rate for all gas consumed in excess of 20 thousand cubic feet was 50 cents per thousand cubic feet. According to the analysis made by the various experts, this seemed rather low, notwithstanding the fact that for the peak load in the winter, the system

## NEW YORK DEPARTMENT OF PUBLIC SERVICE

need not be increased to supply the gas used for house heating.

The company's house-heating rate makes a radical drop in the rate after a monthly use of 2,500 cubic feet, the drop being from \$1.30 to 70 cents per thousand cubic feet. The record does not justify such a radical departure from the other rates and a price for the third block of 90 cents per thousand cubic feet seems more reasonable and in line with the cost of rendering the service.

The entire heating rate thus becomes:

First	400 cu. ft. or less	\$.85
Next	2,200 cu. ft. ....	1.20 per M cu. ft.
Next	2,400 cu. ft. ....	.90 per M cu. ft.
Next	5,000 cu. ft. ....	.75 per M cu. ft.
Next	10,000 cu. ft. ....	.65 per M cu. ft.
Excess of 20,000 cu. ft. ....		.55 per M cu. ft.
Minimum bill \$.85 per month.		

### *Nassau County Rates*

[18] In the early part of this memorandum, the testimony presented by Mr. Goldthwaite and Mr. Scharff in relation to average cost differentials was discussed. Having determined upon three rates for New York city, we are now in position to review that testimony and to decide in the light of the determinations herein made what, if any, differential should be made between the rates for New York city and those for the Nassau county territory disregarding the summer rates for reasons already stated.

There is in the record no adequate analysis of the cost of supplying service in the various blocks and in the various classes of service in New York city and Nassau county. There are, however, certain average figures and considerable data from which it

is possible to ascertain the approximate difference in the cost of service.

Upon the basis of the conclusions heretofore reached, which necessitates certain adjustments in the cost of service to the two areas, it develops that under the apportionment method the average difference in the cost of service between New York city and Nassau county is about 6 cents per thousand cubic feet sold. Under the increment method, the difference is about 4 cents. As already stated, neither method is considered to be the sole standard for determining rates and as rates cannot wisely be determined meticulously by cost allocations and as the block rates should be in multiples of five, I recommend that the year-round rates in Nassau county and the heating rates be fixed at a constant differential of 5 cents per thousand cubic feet.

The net effect of the proposed rates cannot definitely be determined but it seems reasonably certain that the rates herein proposed will yield as much additional revenue over the old rates as will the rates which the company is billing and which it has not substantiated. Further, and this is even more important, upon the analyses made by Mr. Goldthwaite and giving some weight to each of the methods therein used, but not adopting as a sole guide either the apportionment method or the increment cost method, the rates now determined yield at least a fair return upon the fair value of the property of the company used to serve general consumers in the city of New York and in the Nassau county territory. As already stated, no attempt has been made here-

## RE QUEENS BOROUGH GAS & ELECTRIC CO.

in to fix the fair rate for gas supplied to the Nassau and Suffolk Lighting Company or the Long Beach Gas Company.

Briefly summarized, the conclusions herein reached are that the Queens Borough Gas and Electric Company has not borne the burden of proof required by the statute, has not substantiated or proved the reasonableness of the proposed rates and should be directed to cancel such rates as of June 1, 1941, and to establish the rates herein found as just and reasonable for the two areas served, such rates to become effective as of June 1, 1941.

[19] Having found that the rates proposed have not been substantiated, the question arises whether the company should be required to refund the difference between the rates under which they have been charging the public and the reasonable rates herein established. In strict theory, the company should refund to every consumer who has paid more than the rates herein fixed and every consumer who has paid less should pay to the company the difference between the two rates. As the character of the schedules herein established is so different from the old rates or the new rates and as summer customers particularly would be required to pay considerably more for periods long past than they did pay, it does not

seem reasonable to require the company to make the refunds on the one hand or attempt the collections on the other. Indeed, it is doubtful whether the company has a legal right to collect from consumers the difference between the Commission rates and the company rates. The consumers have paid the bills as rendered and if the company were to attempt to collect more on past bills, it would encounter serious and determined opposition and would doubtless not try to do so. The Commission found in a prior rate case and finds in this case that the company was entitled to more revenue than it obtained under the old rates. All in all, it seems only fair under all of the circumstances to permit the company to retain the revenues collected provided the new rates are promptly made effective and the inequality is not continued. However, if the company should not accept the order of the Commission and make these rates effective as of June 1, 1941, it would be faced with the statutory requirement of canceling the present rates because they have not been substantiated; they are not just and reasonable rates; and legally the company would be required to put into effect the old rates and to refund to consumers the difference between the old rates and the present rates.

All concur.

TENNESSEE RAILROAD AND PUBLIC UTILITIES COMMISSION

TENNESSEE RAILROAD AND PUBLIC UTILITIES COMMISSION

## Re Jackson Housing Authority et al.

[Docket No. 2494.]

*Rates, § 313 — Combined billing — Low-rent housing and slum clearing projects.*

1. Master metered gas service at volume rates to a housing authority operating low-rent housing and slum clearance projects constructed under authority of the state Housing Authorities Law, with financial assistance of the United States Housing Authority, is proper, p. 101.

*Rates, § 384 — Gas — Low-rent housing and slum clearance projects — Large industrial rates.*

2. The large industrial rate of a gas utility was held to be proper for application to service furnished to low-rent housing and slum clearance projects, constructed under authority of the state Housing Authorities Law, with financial assistance of the United States Housing Authority, p. 101.

*Service, § 170 — Resale prohibition — Validity of check-metering plan — Low-rent housing and slum clearance projects.*

3. A check-metering plan of a housing authority, obtaining gas service under contract through a master meter for low-rent housing and slum clearance projects, does not violate a utility rule prohibiting resale of service where the authority installs individual meters in each tenant's premises to record consumption of service, in order to curb excess uses of gas included in rental, but includes in the process no charge computed on the basis of cubic feet of excess consumption by the individual tenant, p. 101.

[June 9, 1941.]

**P**ETITION by housing authority for approval of contract for gas service to low-rent housing and slum clearance projects under plan for combined billing for wholesale natural gas supply; contract approved and special classification of such projects under similar circumstances approved.

By the COMMISSION: By this petition, the Jackson Housing Authority requests approval of a contract for gas service to two low-rent housing and slum clearance projects constructed in Jackson, Tennessee, under authority of the Housing Authorities Law of the state of Tennessee, with the financial assistance—through loans and annual rent-reducing subsidies—of the United States Housing Authority.

Specifically, the attention of the Commission has been drawn by the petition to: (1) the applicability to such projects of the large industrial rate of the West Tennessee Gas Company (hereinafter referred to as the "Utility"), on file with the Commission under the designation "Schedule NG-5A"; and (2) the legality of a certain method of operation proposed by the Jackson Housing Authority

## RE JACKSON HOUSING AUTHORITY

(hereinafter referred to as the "Authority"), referred to as "check metering," in view of the rule of the company prohibiting the resale of service.

[1, 2] Briefly, the contract provides for service to the Authority through a single master meter installed in each project. The Authority will construct and operate its own distribution system within each project. Tenants will receive a reasonable amount of gas for cooking, space heating, water heating, and incidental uses, and will pay for such service as a part of their rent. The Utility will deal only with the Authority, which will be responsible for payment for all gas consumed by each project.

The petition states, and the Commission finds, that through the construction of these two projects the Utility will acquire a substantial amount of new and increased business, directly, through the rehousing of families in circumstances under which utility appliances are furnished free of charge by the Authority, thus facilitating a use of service not available to the Utility by ordinary promotional methods; indirectly, through a greater availability of family income for such items as utility services as a consequence of the low rents charged by the Authority. It may be said, by way of explanation, that tenants of the projects are drawn from substandard housing areas where poverty has made the enjoyment of decent and modern living conditions virtually impossible. The tenants of each project will be housed on a single, large site, thus making available to the Utility a concentration of customers. A large volume of service will be furnished to the tenants, in each project through a

master meter. There the responsibility of the Utility will cease, permitting savings to the Utility in elimination of individual billing, meter reading, collections, line leakage expenses, and maintenance of meters and services on individual premises—items which are a normal consideration in furnishing domestic service. The credit of the Authority, a public body, will be substituted for individual credit risks; and this credit is enhanced by the availability of annual subsidies from the United States Housing Authority, applicable toward the rents, a component part of which are the Utility charges.

In addition to the above-enumerated economic factors, it is important to note that service under the contract in question is to be extended to an agency of the city of Jackson, devoted to a public use or purpose, so held by the supreme court of the state of Tennessee in *Knoxville Housing Authority v. Knoxville* (1939) 174 Tenn 76, 123 SW(2d) 1085. This purpose, according to the petition, can be served only if rents within the projects, which include utility costs, may be maintained at a level compatible with the economic condition of the low-income families who alone are eligible to occupy the projects. Under these circumstances, master-metered service to such projects, at volume rates, is proper.

For the reasons hereinbefore enumerated, the Schedule NG-5A, incorporating the large industrial rate of the Utility, is hereby determined to be proper for application to service furnished to the projects in question.

[3] The contract further provides,



## TENNESSEE RAILROAD AND PUBLIC UTILITIES COMMISSION

in § 16 thereof, that the Authority may install individual meters in each tenant's premises to record consumption of service. This installation, under the terms of § 16, is for the sole purpose of checking wasteful and extravagant usage of gas by the tenants. The petitioner has submitted a brief in support of the proposition that the measuring of service for this limited purpose does not constitute resale of service to the tenants by the Authority within the contemplation of the rule of the company. It is stated that such steps as the Authority may take to curb excess usage of service will not reflect a profit to the Authority, nor will any charge imposed in the process be computed on the basis of cubic feet of excess consumption by the individual tenant. It appears that unless "check-metering" is authorized, some tenants may make wasteful and extravagant use of the gas service furnished them as a part of their rent,

thus requiring an increase in all rents and jeopardizing the low-rent purpose of the public housing program in Jackson, Tennessee.

After careful consideration of the "check-metering" plan outlined and the end in view, the Commission is of the opinion that no violation of the rule of the Utility prohibiting resale of service is involved, and hereby so determines.

It is the further opinion of the Commission that the facts, conditions, and circumstances adduced in support of this petition for approval of a special contract for natural gas service amply justify approval of such contract and warrant the special classification for rate purposes of low-rent housing and slum clearance projects accepting utility service under the same or similar circumstances. The Commission so orders. This matter will remain on the docket for further and future matters.

## FEDERAL POWER COMMISSION

### Re Home Gas Company

[Docket Nos. G-183, G-190, G-192, Opinion No. 62.]

#### *Rates, § 186 — Reasonableness — Burden of proof — Natural Gas Act.*

1. A natural gas company within the meaning of the Natural Gas Act has the burden of proof to show that proposed increases in rates or charges are just and reasonable, p. 106.

#### *Rates, § 187 — Reasonableness — Burden of proof — Sufficiency of evidence.*

2. A gas distributing company fails to sustain the burden of proof to show that proposed increased rates are reasonable when the higher rates are sought because of an increase in the cost of gas supplied by affiliated companies and the company fails to justify such cost, p. 106.

## RE HOME GAS CO.

### *Expenses, § 86 — Payments to affiliates — Natural gas supply.*

3. A natural gas distributing company, in order to justify payment to affiliated companies for producing and transporting its gas supply, must adduce evidence as to the value of the property used or useful in connection with the services rendered to it by its affiliates, the operating cost to said affiliates of rendering such service, and the rates necessary to produce a reasonable return to said affiliates on the property used or useful in rendering such services, p. 106.

### *Rates, § 240 — Effect of filing — Evidence as to reasonableness.*

4. The acceptance of a wholesale gas rate schedule for filing does not mean that the Commission approves it and does not, for the purposes of a proceeding involving distribution rates of a natural gas company, establish the justness, reasonableness, or propriety of rates of affiliated supply companies so filed, p. 109.

[June 11, 1941.]

**I**NVESTIGATION of proposed increases in natural gas rates; increased rates disapproved for failure to meet burden of proof, and order entered requiring return of excess charges collected under bond.

APPEARANCES: Albert M. Calland, for Home Gas Company; Richard J. Connor, George Slaff, and Arthur A. Gladstone, for the Commission.

By the COMMISSION: These proceedings arise out of the efforts of Home Gas Company (hereinafter sometimes referred to as the Respondent) to effect certain rate increases for natural gas sold to its customers. On the record herein the following findings are made:

(1) On July 22, 1940, Home Gas Company filed with the Federal Power Commission agreements, dated August 1, 1938, with the Keystone Gas Company, Inc., and the Binghamton Gas Works, respectively, designated in the files of the Commission as Home Gas Company Rate Schedules F.P.C. Nos. 10 and 11, providing for the sale of natural gas by Home Gas Company to the Keystone Gas Company, Inc., and Binghamton Gas Works, for re-

sale for ultimate public consumption for domestic, commercial, industrial, or any other use.

(2) On August 22, 1940, Home Gas Company filed with the Commission agreements, dated July 1, 1940, with the Keystone Gas Company, Inc., and Binghamton Gas Works, respectively, designated in the files of the Commission as Home Gas Company Rate Schedules F.P.C. Nos. 18 and 19, providing that increased rates or charges for such sales of natural gas to the Keystone Gas Company, Inc., and Binghamton Gas Works, be made effective retroactively as of July 1, 1940.

(3) Without the approval of the Commission giving retroactive effect to said Home Gas Company Rate Schedules F.P.C. Nos. 18 and 19, and unless suspended by order of the Commission, the same would have become effective as of September 22, 1940, pursuant to the provisions of the Nat-

## FEDERAL POWER COMMISSION

ural Gas Act and the Provisional Rules of Practice and Regulations thereunder.

(4) By order of September 20, 1940, the Commission, acting pursuant to the provisions of § 4 of the Natural Gas Act, 15 USCA § 717c, entered upon a hearing concerning the lawfulness of the rates and charges contained in said Home Gas Company Rate Schedules F.P.C. Nos. 18 and 19, and suspended said proposed increased rates and charges for a period of five months beyond September 22, 1940, unless the Commission should thereafter otherwise order.

(5) Thereafter, pursuant to a request and stipulation of the Respondent, by order of January 2, 1941, the Commission postponed the date for resumption of hearing herein, and extended the period of suspension of Home Gas Company Rate Schedules F. P. C. Nos. 18 and 19 to March 18, 1941.

(6) Prior to and on November 26, 1940, Home Gas Company had on file with the Commission, and then in force, certain rate schedules designated in the files of the Commission as Home Gas Company Rate Schedules F.P.C. Nos. 1, 2, and Supplement No. 1 thereto, containing rates for sale of natural gas by Home Gas Company to Rockland Gas Company, Inc., and Rate Schedules F.P.C. Nos. 6 and 7, containing rates for sale of natural gas to Rockland Light and Power Company.

(7) On November 26, 1940, Home Gas Company filed with the Commission agreements, dated October 31, 1940, with Rockland Gas Company, Inc., and Rockland Light and Power Company, respectively, designated in

the files of the Commission as Home Gas Company Supplement No. 1 to Rate Schedule F.P.C. No. 1, Supplement No. 2 to Rate Schedule F.P.C. No. 2, Supplement No. 1 to Rate Schedule F.P.C. No. 6, and Supplement No. 1 to Rate Schedule F.P.C. No. 7, providing that increased rates or charges for such sales of natural gas by Home Gas Company to Rockland Gas Company, Inc., and Rockland Light and Power Company, be made effective retroactively as of November 1, 1940.

(8) Without the approval of the Commission giving retroactive effect to said Home Gas Company Supplement No. 1 to Rate Schedule F.P.C. No. 1, Supplement No. 2 to Rate Schedule F. P. C. No. 2, Supplement No. 1 to Rate Schedule F.P.C. No. 6, and Supplement No. 1 to Rate Schedule F.P.C. No. 7, the said schedules, unless suspended by order of the Commission, would have become effective as of December 26, 1940, pursuant to the provisions of the Natural Gas Act and the Provisional Rules of Practice and Regulations thereunder.

(9) By order of December 20, 1940, the Commission entered upon a hearing concerning the lawfulness of the rates and charges contained in said Home Gas Company Supplement No. 1 to Rate Schedule F.P.C. No. 1, Supplement No. 2 to Rate Schedule F.P.C. No. 2, Supplement No. 1 to Rate Schedule F.P.C. No. 6, and Supplement No. 1 to Rate Schedule F.P.C. No. 7, and suspended the said proposed increased rates and charges for a period of five months beyond December 26, 1940, unless the Commission should thereafter otherwise order.

## RE HOME GAS CO.

(10) Prior to and on December 13, 1940, Home Gas Company had on file with the Commission, and then in force, a rate schedule designated in the files of the Commission as Home Gas Company Rate Schedule F.P.C. No. 4, containing rates for sale of natural gas by Home Gas Company to the New York State Electric & Gas Corporation, as successor to Owego Gas Corporation.

(11) On December 13, 1940, Home Gas Company filed with the Commission an agreement, dated October 31, 1940, with the New York State Electric & Gas Corporation, as successor to Owego Gas Corporation, designated in the files of the Commission as Home Gas Company Supplement No. 1 to Rate Schedule F.P.C. No. 4, providing that increased rates or charges for sales of natural gas by Home Gas Company to the New York State Electric & Gas Corporation be made effective retroactively as of November 1, 1940.

(12) Without the approval of the Commission giving retroactive effect to said Home Gas Company Supplement No. 1 to Rate Schedule F.P.C. No. 4, the said schedule, unless suspended by order of the Commission, would have become effective as of January 12, 1941, pursuant to the provisions of the Natural Gas Act and the Provisional Rules of Practice and Regulations thereunder.

(13) By order of January 2, 1941, the Commission entered upon a hearing concerning the lawfulness of the rates and charges contained in said Home Gas Company Supplement No. 1 to Rate Schedule F.P.C. No. 4, and suspended the said proposed increased rates and charges for a period of five

months beyond January 12, 1941, unless the Commission should thereafter otherwise order.

(14) Upon petition of the Respondent, filed January 9, 1941, the Commission, by order of January 28, 1941, permitted the Respondent to post a bond in the sum of \$150,000, and, subject to certain conditions more fully set forth in said order and bond, permitted the Respondent provisionally to collect and receive the proposed increased rates and charges provided in Home Gas Company Rate Schedules F.P.C. Nos. 18, 19, Supplement No. 1 to Rate Schedule F.P.C. No. 1, Supplement No. 2 to Rate Schedule F.P.C. No. 2, Supplement No. 1 to Rate Schedule F.P.C. No. 6, Supplement No. 1 to Rate Schedule F.P.C. No. 7, and Supplement No. 1 to Rate Schedule F.P.C. No. 4.

(15) Pursuant to the various orders of the Commission hereinabove related, and pursuant to a specific stipulation of Respondent at the hearing herein, all of the proceedings in the above-mentioned matters were consolidated, and all of the proceedings were treated as relating equally to each case ab initio.

(16) Home Gas Company is engaged, among other things, in the business of purchasing natural gas at Majorsville, West Virginia, pursuant to a contract with United Fuel Gas Company, the vendor of said gas, and of having said gas transported for it by Manufacturers Gas Company, Pennsylvania Fuel Supply Company, and the Manufacturers Light and Heat Company, from Majorsville, West Virginia, for delivery to the pipe-line system of Home Gas Company, in New York state, at a point

## FEDERAL POWER COMMISSION

near the Pennsylvania-New York state line in Cattaraugus county, New York, and of thereafter selling said gas at wholesale for resale for ultimate public consumption for domestic, commercial, industrial, or other use.

(17) The persons to which Home Gas Company sells such natural gas are the Keystone Gas Company, Inc., Binghamton Gas Works, Rockland Gas Company, Inc., Rockland Light and Power Company, and the New York State Electric & Gas Corporation, all situated in the state of New York.

(18) Home Gas Company, the Keystone Gas Company, Inc., Binghamton Gas Works, United Fuel Gas Company, Manufacturers Gas Company, Pennsylvania Fuel Supply Company, and the Manufacturers Light and Heat Company, are all affiliated by virtue of their common stock ownership, control and management, by Columbia Gas & Electric Corporation.

(19) The transportation and sale of natural gas by Home Gas Company to the Keystone Gas Company, Inc., Binghamton Gas Works, Rockland Gas Company, Inc., Rockland Light and Power Company, and the New York State Electric & Gas Corporation, pursuant to the provisions of the respective applicable rate schedules, is a transportation in interstate commerce and a sale in interstate commerce of natural gas for resale for ultimate public consumption for domestic, commercial, industrial, or other use.

(20) Home Gas Company is a natural gas company within the meaning of the Natural Gas Act.

(21) The rates and charges contained in Home Gas Company Rate

Schedules F.P.C. Nos. 18, 19, Supplement No. 1 to Rate Schedule F.P.C. No. 1, Supplement No. 2 to Rate Schedules F.P.C. No. 2, Supplement No. 1 to Rate Schedule F.P.C. No. 6; Supplement No. 1 to Rate Schedule F.P.C. No. 7, and Supplement No. 1 to Rate Schedule F.P.C. No. 4, constitute proposed changes of rates and charges, and said proposed rate schedules and supplements thereto are new schedules within the meaning of §§ 4 (d) and 4(e) of the Natural Gas Act, 15 USCA § 717c.

[1-3] (22) Under the provisions of § 4(e) of the Natural Gas Act, *supra*, the burden of proof, at the hearings held herein, to show that the proposed increased rates or charges are just and reasonable, was upon the Respondent.

(23) Respondent has adduced no evidence as to the cost or fair value of the property of its affiliate, United Fuel Gas Company, used and useful in connection with the sale of gas by the latter to the former, nor any evidence as to the operating costs of its said affiliate, nor as to the rate of return which would constitute a reasonable rate of return to said affiliate on the property used and useful in said operation.

(24) Respondent has adduced no evidence as to the cost or fair value of the property of its affiliates, Manufacturers Gas Company, Pennsylvania Fuel Supply Company, and the Manufacturers Light and Heat Company, used and useful in connection with the transportation of gas for the Respondent from Majorsville, West Virginia, to New York, nor as to the rate of return which would constitute a reasonable rate of return to said affil-



## RE HOME GAS CO.

ates on the properties of the latter used and useful in said operation, nor any substantial evidence as to the operating costs of said affiliates.

(25) The Respondent has not met the burden of proof imposed upon it by the Natural Gas Act.

The background of this case is that prior to the winter of 1939 Respondent had been able to obtain its gas from fields in and around New York state, but the winter of 1939 demonstrated to all concerned that the gas supply of these fields was near depletion, and it appeared that no new fields of production were closely at hand. Consequently Respondent sought to obtain gas elsewhere and turned to its affiliate, United Fuel Gas Company (hereinafter called United), which had a plentiful supply from production areas in West Virginia. United agreed to sell gas to Respondent for 30 cents per thousand cubic feet, and make delivery of the same at a point in West Virginia. Respondent, therefore, sought further assistance from its affiliates, Manufacturers Gas Company, Pennsylvania Fuel Supply Company, and the Manufacturers Light and Heat Company (hereinafter collectively called Manufacturers). This group of companies agreed to transport Respondent's gas from West Virginia to New York at a cost to Respondent of 10.65 cents per thousand cubic feet, plus an allowance for line loss.

The gas previously obtained by Respondent in and about New York had cost it approximately 20 cents per thousand cubic feet. The gas obtained from West Virginia under the new arrangement cost Respondent approximately 40.65 cents per thousand

cubic feet, exclusive of line loss. Thus, it was claimed an increase of rates was necessary and appropriate, and proposed new and increased rate schedules were filed with the Commission by Respondent.

No discussion will be had of the various insufficiencies of Respondent's evidence as to its own properties, capitalization, operating expenses exclusive of cost of gas, etc. Rather we shall base our decision upon the fatal defect which exists in that portion of Respondent's proof which purports to establish the justness and reasonableness of the respective rates charged Respondent by its affiliates.

Respondent, in purported justification of the contracts with its affiliates and the rates therein contained, merely adverted to the fact that the contracts and schedules containing those rates had been filed with the Commission; that the rate charged for gas sold by United was the same as that charged another affiliate for gas delivered at the same point; that the rate charged for transportation of the gas from West Virginia to New York was the average cost per thousand cubic feet of gas transported by certain of the system's affiliates known as the "Pittsburgh group," which included several companies not involved in the instant transaction.

Through motion of Commission counsel it was made clear to the Respondent, at the hearings, that the above-described evidence on the transactions with Respondent's affiliates was insufficient; that it would be necessary, under the doctrine of *Western Distributing Co. v. Kansas Pub. Service Commission*, 285 US 119, 76 L ed 655, PUR1932B 236, 52 S Ct 283,

## FEDERAL POWER COMMISSION

for Respondent to adduce evidence as to the value of the property used or useful in connection with the services rendered it by its affiliates, the operating costs to said affiliates of rendering such services, and the rate necessary to provide a reasonable return to said affiliates on the property used or useful in rendering such services. None the less, Respondent refused so to do, and insisted that the evidence it had adduced was a sufficient justification of its transactions with its affiliates and the rates charged by them.

When the Respondent did what amounted to "resting" on the record, Commission counsel rested also, relying on Respondent's failure of proof as above noted. Respondent moved, among other things, to put the rates into effect, on the ground that it had met the burden of proof herein. The examiner refused to entertain this motion on the ground that he had no authority so to do.

On May 14, 1941, Respondent filed with the Commission a formal motion requesting that it make a determination that Respondent had satisfied its burden of proof in these proceedings as to the rates charged by its affiliates, through the evidence already related herein, and by telegram of June 10, 1941, Respondent advised the Commission that consideration was desired only on the single question presented by the motion of May 14th, and not upon a certain alternative motion made at the hearings.

That single issue raised by the motion of May 14th is here met and disposed of. The doctrine of *Western Distributing Co. v. Kansas Pub. Service Commission*, *supra*, has not been overruled. The facts of that case are

on all fours with the instant case. Its tenets are sound and just. The principles of that decision as summarized in the opinion of the Court are conclusive here. See 285 US at p. 125, PUR 1932B at pp. 240, 241:

"*Third.* The appellant adverts to the fact that in its bill of complaint are included a number of averments not denied by the appellees. In brief these are that the company does not own or produce any natural gas; that the only source of supply for the city of Eldorado is the main of the Cities Service Gas Company; that no supply at a lower price can be obtained from any other source; that the same rate is being charged to other distributing companies along the lines of the Cities Service Gas Company, and was being charged by another independent pipe line to another city; that an ineffectual effort had been made to find local gas available to Eldorado; and that appellant had attempted to get a lower rate from Cities Service Gas Company but could not do so. It is urged that as these averments were uncontradicted they constitute, when taken with the facts previously stated, a *prima facie* case for the reasonableness of the rate charged. This might well be true were it not for the fact of unity of ownership and control of the pipe line and the distribution system. An averment of negotiation and effort to procure a reduction in the wholesale rate means little in the light of the fact that the negotiators are both acting in the same interest,—that of the holding company which controls both. All of these facts so averred in the pleadings would be far more persuasive with respect to the propriety of the rate if the parties were independent of each other

## RE HOME GAS CO.

and dealing at arm's length. Where, however, they constitute but a single interest and involve the embarkation of the total capital in what is in effect one enterprise, the elements of double-profit and of the reasonableness of intercompany charges must necessarily be the subject of inquiry and scrutiny before the question as to the lawfulness of the retail rate based thereon can be satisfactorily answered.

"Fourth. The argument is made that the proofs demanded by the Commission will involve an extensive and unnecessary valuation of the pipe-line company's property and an analysis of its business, and that this burden should not be thrown upon appellant. Whether this is so we need not now decide. It is enough to say that in view of the relations of the parties and the power implicit therein arbitrarily to fix and maintain costs as respects the distributing company which do not represent the true value of the service rendered, the state authority is entitled to a fair showing of the reasonableness of such costs, although this may involve a presentation of evidence which would not be required in the case of parties dealing at arm's length and in the general and open market, subject to the usual safeguards of bargaining and competition."

The Commission is entitled to be informed fully and completely on the details of any transaction between affiliated companies, and the Commission will insist that every company coming before it will discharge its obligation in that regard.

[4] The contention of Respondent that the rates of its affiliates are justified merely because they are on file with the Commission is summarily

dismissed. The rate schedules referred to were all initial filings made pursuant to § 4(c) of the Natural Gas Act, *supra*. The acceptance for filing of a schedule does not mean that the Commission approves it, and does not, for the purposes of this kind of proceeding, establish its justness, reasonableness, or propriety.

Respondent, therefore, having failed to meet the burden of proof imposed upon it, an order will be entered in accordance with this opinion.

### *Order Denying Motion and Disallowing Proposed Increased Rates and Charges*

Upon consideration of the record herein and for the reasons and upon the findings set forth in Opinion No. 62 hereby referred to and made a part hereof;

The Commission *orders* that:

(A) Respondent's motion filed May 14, 1941, be and it is hereby denied;

(B) The proposed increased rates and charges for the sale of natural gas by Home Gas Company to the Keystone Gas Company, Inc., Binghamton Gas Works, Rockland Gas Company, Inc., Rockland Light and Power Company, and the New York State Electric & Gas Corporation, respectively, for resale for ultimate public consumption, as contained in the respective schedules designated as Home Gas Company Rate Schedules F.P.C. Nos. 18, 19, Supplement No. 1 to Rate Schedule F.P.C. No. 1, Supplement No. 2 to Rate Schedule F.P.C. No. 2, Supplement No. 1 to Rate Schedule F.P.C. No. 6, Supplement No. 1 to Rate Schedule F.P.C. No. 7, and Supplement No. 1 to Rate Schedule

## FEDERAL POWER COMMISSION

F.P.C. No. 4, be and the same are hereby disallowed;

(C) The rates and charges contained in the respective Home Gas Company Rate Schedules F.P.C. Nos. 1, 2 and Supplement No. 1 thereto, 4, 6, 7, 10, and 11, which were heretofore in effect, and which contained the rates and charges for natural gas sold by Home Gas Company to the Keystone Gas Company, Inc., Binghamton Gas Works, Rockland Gas Company, Inc., Rockland Light and Power Company, and the New York State Electric & Gas Corporation, respectively, for resale for ultimate public consumption, are hereby reinstated, and shall be and remain in force and effect until further order of the Commission;

(D) Effective as of the date hereof, the permission heretofore granted in the Commission's order of January 28, 1941, that Respondent provisionally collect and receive, subject to bond, the increased rates or charges contained in Home Gas Company Rate Schedules F.P.C. Nos. 18, 19, Supplement No. 1 to Rate Schedule F.P.C. No. 1, Supplement No. 2 to Rate Schedule F.P.C. No. 2, Supplement No. 1 to Rate Schedule F.P.C. No. 6, Supplement No. 1 to Rate Schedule F.P.C. No. 7, and Supplement No. 1 to Rate Schedule F.P.C. No. 4, shall cease and terminate;

(E) Within thirty days from the date hereof, Home Gas Company shall well and truly refund to the Keystone Gas Company, Inc., Binghamton Gas

Works, Rockland Gas Company, Inc., Rockland Light and Power Company and the New York State Electric & Gas Corporation, respectively, all those moneys charged, collected, or received by it from said respective companies, being the difference between the rates provided for in Home Gas Company Rate Schedules F.P.C. Nos. 1, 2 and Supplement No. 1 thereto, 4, 6, 7, 10, and 11, and those contained in Home Gas Company Rate Schedules F.P.C. Nos. 18, 19, Supplement No. 1 to Rate Schedule F.P.C. No. 1, Supplement No. 2 to Rate Schedule F.P.C. No. 2, Supplement No. 1 to Rate Schedule F.P.C. No. 6, Supplement No. 1 to Rate Schedule F.P.C. No. 7, and Supplement No. 1 to Rate Schedule F.P.C. No. 4, together with interest thereon at the rate of 6 per cent per annum, from the date of receipt of said moneys by Home Gas Company, to the date of refund and repayment thereof by Home Gas Company to said respective customers;

(F) Within forty days from the date hereof, Home Gas Company shall certify to the Federal Power Commission that it has fully complied with this order, and shall furnish a detailed statement showing the mode of calculation, and amounts of payments, of all refunds, as well as the dates thereof, and shall obtain and furnish a receipted satisfaction or release from each of its aforesaid customers evidencing discharge of its liability to make such refunds.

Michigan Bell Telephone Company  
v.  
Michigan Public Service Commission

[No. 54.]

(— Mich —, 297 NW 198.)

*Rates, § 43 — Jurisdiction of Commission — Scope of proceeding.*

1. The Commission, in investigating a telephone company's intrastate toll rate, was only required to determine upon competent evidence that the existing rates for intrastate toll service were excessive or discriminatory, and it could limit its inquiry to that particular branch of the service provided evidence was adduced to sustain its findings, p. 118.

*Return, § 69 — Interstate and intrastate operation — Necessity of property segregation — Telephone tolls.*

2. The rule that a telephone rate order must be based on the value of property used in intrastate business segregated from the property used in interstate business, although proper when confiscation is charged, is not applicable in a case involving the question of discrimination in intrastate rates differing from interstate rates where there is no charge of confiscation, p. 118.

*Rates, § 190 — Presumption as to reasonableness — Rates established by Federal Commission.*

3. It must be assumed that rates established by the Federal Communications Commission for interstate telephone tolls are fair and reasonable, p. 118.

*Discrimination, § 181 — Telephones — Interstate and intrastate toll rates.*

4. A Commission order requiring a telephone company to reduce its intrastate toll rates to the same basis and measure as provided in its interstate toll rate schedule will stand, where there is substantial evidence showing that the company charges higher tolls within the state than it requires for the same service interstate with the use of the same facilities and for a comparable distance, p. 118.

*Discrimination, § 6 — Due process — Rate investigation.*

5. The Commission, in ordering a telephone company to eliminate discrimination by reducing intrastate toll rates to the same basis and measure as provided in its interstate toll rate schedule, did not deprive the company of due process of law where it served the company with an order informing it of the nature of the complaint made concerning its tolls for intrastate long-distance service, where it accorded the company a hearing, and where after issuance of the order the company appealed in the manner provided by statute, p. 121.



## MICHIGAN SUPREME COURT

### *Appeal and review, § 34 — Commission orders — Burden of proof.*

6. A telephone company appealing from a Commission order requiring it to reduce its intrastate toll rates to the same basis and measure as provided in its interstate toll rate schedule, has the burden of showing by clear and satisfactory evidence that the order is unlawful or unreasonable, p. 121.

(BUTZEL, J., concurs in separate opinion.)

[April 8, 1941.]

**A**PPPEAL by telephone company from decree dismissing complaint in suit to review, vacate, and set aside Commission order reducing intrastate toll rates; affirmed. For decision by Commission, see 25 PUR(NS) 24.

**APPEARANCES:** Thomas G. Long, Karl F. Oehler, Butzel, Eaman, Long, Gust & Bills, of Detroit, for plaintiff; Thomas Read, Attorney General, and Edmund E. Shepherd and James W. Williams, Assistants Attorney General, for defendant-appellee.

**SHARPE, J.:** This is an appeal from a final decree dismissing a bill of complaint filed by plaintiff to review, vacate, and set aside an order made by the Michigan Public Utilities Commission in respect of intrastate toll rates charged by the Michigan Bell Telephone Company within this state.

On March 24, 1938, the Michigan Public Utilities Commission, upon its own motion, undertook consideration of the message toll charges of the telephone company rendered within the state; and instituted an investigation concerning reported unreasonable, excessive, and unjust rates imposed upon the public for toll service between various Michigan points which charges were reported to be discriminatory when compared with interstate message toll rates maintained between Michigan and out-of-state points by the Michigan Bell Telephone Compa-

ny and the American Telephone and Telegraph Company.

The Commission issued an order directed to the Michigan Bell Telephone Company to show cause why the Commission should not enter an order requiring the company to cease from the collection of unjust charges for intrastate toll message service and reduce its intrastate message toll rate schedule to the same basis and measure as provided in the interstate toll rate schedule. The order recited that the telephone company was required by the provisions of Act No. 206, Public Acts 1913, to collect and enforce for services rendered only such charges as would be reasonable and just; and that the telephone company was prohibited from charging, collecting, or receiving from any person or persons greater or less compensation for any service rendered than it charges, demands, collects, or receives from any other person for rendering, furnishing or performing for him or them a like or contemporaneous service.

Upon the issuance of the above order, the telephone company filed an answer denying that such discrimination existed and averred that the Com-

MICHIGAN BELL TELEPH. CO. v. MICHIGAN PUB. SERV. COM.

mission was without jurisdiction in the premises; that the rates for intrastate toll telephone service were just and reasonable; that the Commission in 1926 and 1936 had established reasonable rates for exchange and toll services; and that in the proceedings of June 1, 1926, and July 1, 1936, all the property of the company devoted to the rendition of intrastate telephone service within the state of Michigan and all its services therein were considered as a unit for the purpose of rate making and any action on the part of the Commission in reducing rates and charges for intrastate telephone service without a consideration of the necessity of affording the telephone company an opportunity to earn a compensatory return on its entire property is a denial of due process of law.

The Commission held a hearing commencing April 26, 1938, at which time the telephone company offered no testimony in respect to its revenue nor did it offer evidence to sustain the theory that a substantial reduction of its intrastate toll rates would lead to confiscation of its property without due process of law.

On June 27, 1938, 25 PUR(NS) 24, 36, the Commission entered the following order:

"Therefore, it is *ordered* that—

"1. Effective 12:01 A. M. August 1, 1938, the intrastate toll message rates of the Michigan Bell Telephone Company, including station-to-station and person-to-person, both day, night and Sunday rates and report charges be reduced to the same rate level charged and established by the said American Telephone and Telegraph Company and Michigan Bell Tele-

phone Company under their established rate and mileage schedule for message toll telephone service interstate from and to points within Michigan limits for similar classes of service.

"2. Within a reasonable period following receipt of the certified copy of this order, but not later than July 20, 1938, the Michigan Bell Telephone Company shall make and file with this Commission its telephone tariff modifications to comply with this order.

"3. This Commission hereby specifically reserves unto itself jurisdiction of this matter and the right to make such other or further order or orders herein as shall be deemed necessary and advisable."

The reasons and grounds for entering of the above order as stated in the opinion of the Commission, *supra*, at p. 25, are as follows: "The Michigan Bell Telephone Company, hereinafter called the 'Bell,' is engaged in the conduct of telephone business in the state of Michigan, as a corporation organized under the laws of this state, with a capital stock of 1,250,000 shares of which 1,249,900 shares at least, are owned by the American Telephone and Telegraph Company, a corporation, organized under the laws of the state of New York, having its principal headquarters at 195 Broadway, New York city, New York, which company is hereinafter designated 'Long Lines Company.' The latter actually has the direct control of the Bell through the foregoing stock ownership, and, as heretofore determined by the Michigan supreme court in *People ex rel. Attorney General v. Michigan Bell Teleph. Co.* 246 Mich 198, PUR1929B 455, PUR1929E 27,

## MICHIGAN SUPREME COURT

224 NW 438, the Bell is so organized and controlled by the Long Lines Company as to constitute the Bell the mere instrumentality or agent or adjunct of the Long Lines Company so that the separate existence of the two corporate entities must be ignored and the two corporations considered, for regulatory purposes, as but a single company."

Additional finding of facts as stated in the opinion, *supra*, at p. 35, are as follows:

"(a) The Michigan Bell Telephone Company is the mere adjunct, instrumentality and device of the American Telephone and Telegraph Company, a New York corporation, by which latter substantially all of the Bell Company's capital stock is entirely owned, and its business and affairs wholly dominated and controlled, and that said companies together constitute but a single telephone utility, which is subject in its intrastate business and functions within Michigan to the regulatory control of this Commission.

"(b) That said utility in rendering and furnishing an intrastate toll message telephone service within the state of Michigan furnishes a service which is like and contemporaneous to that furnished by said utility in the interstate transmission of telephone long distance messages to and from points within Michigan limits, for which intrastate service said utility charges, demands, collects and receives from its patrons a greater rate of compensation than charged, demanded, collected, or received from patrons for such interstate toll message service.

"(c) Said utility in its continued practice of charging different and

higher rates for toll message service over distances of more than 42 rate miles within the state of Michigan than charged for comparable distances between points in Michigan and points in other states is an unreasonable and unjust discrimination under the provisions of Act 206 of the Michigan Public Acts of 1913, as amended; that said practice is unduly prejudicial to patrons utilizing intrastate message service and unduly preferential to patrons utilizing interstate message service to the extent that said intrastate message tolls exceed or may exceed message toll rates constructed on the same basis as the interstate message tolls for the same or comparable distances."

On July 7, 1938, the Michigan Bell Telephone Company filed its bill of complaint in the circuit court of Ingham county, in chancery, to review, vacate and set aside the Commission's order as not being in accordance with the law or just rights of plaintiff. It is the claim of the telephone company that the order of June 27, 1938, *supra*, is without competent evidence to support it, is contrary to the evidence produced, arbitrary and denies to plaintiff due process of law in violation of the Fourteenth Amendment to the Constitution of the United States.

Upon the filing of plaintiff's bill of complaint, the trial court ordered defendant Commission to show cause why an interlocutory injunction should not issue and on July 15, 1938, a writ was issued restraining and enjoining the Commission from taking any proceeding to enforce the order of the Commission entered June 27, 1938, *supra*.

MICHIGAN BELL TELEPH. CO. v. MICHIGAN PUB. SERV. COM.

The trial court rendered an opinion in which he stated:

"Essentially, the proceeding was an inquiry into the intrastate toll charges of the plaintiff company; and the conclusions of the Commission were predicated on the record as made, rather than on any alleged failure of the plaintiff to make the showing, in terms, indicated by the initial order.

... The order actually goes far beyond the matter of alleged discrimination and in substance and effect it should be regarded as one for the fixing of intrastate toll rates. It will be noted that plaintiff was not merely required to obviate the alleged discrimination but rather was directed to place its intrastate schedules on the same basis as that pertaining to its interstate business, for similar classes of service.

... "In the proceeding here involved the Commission determined that the two services rendered by plaintiff, that is, the interstate and the intrastate were and are subject to similar considerations as to details and costs of operation. It was assumed that the interstate charges were reasonable, such assumption or conclusion being predicated on the fact that they had been duly established by the Federal Communications Commission and acquiesced, or concurred, in by plaintiff. As a practical proposition I do not understand that any claim is made on behalf of plaintiff that the interstate rates as so fixed are not reasonable. It is insisted that the Commission was in error in deciding, on the basis of the showing made before it, that the two branches of the service may properly be said to be furnished under substantially identical conditions. I am

brought to the conclusion, however, that the proofs reasonably support this determination. There may be some significance in the fact that in 1926, and prior thereto, the rate schedules in the intrastate and interstate rested on the same basis.

"I do not think it can be said that the Commission, in proceeding on the theory suggested, acted wholly without authority. The decision of the Supreme Court in *Illinois Commerce Commission v. United States* (1934) 292 US 474, 78 L ed 1371, 54 S Ct 783, must be regarded as establishing that such method is, under some circumstances, permissible. Defendant, and its predecessor, obviously concluded that the record in this case presented a situation justifying its acceptance. Whether the basis for the conclusion reached was less satisfactory than would have been presented by following the customary method observed in rate-making proceedings need not be specifically determined. The plaintiff herein had the right, before the Commission and on the trial in this court, to offer such proofs as it desired. It has not elected, however, to supply any basis for an affirmative conclusion but relies on the claim that the Commission was without jurisdiction to take action on the proofs submitted in connection with the Commission's theory. It occurs to me that plaintiff is in somewhat the same position as was the railroad company in *Detroit & M. R. Co. v. [Michigan] Railroad Commission* (1912) 171 Mich 335, 137 NW 329.

"Under the provisions of the statute pertaining to the matter of appeal the burden rests on the plaintiff of establishing by clear and satisfactory

## MICHIGAN SUPREME COURT

evidence that the order by which it claims to have been aggrieved is unlawful or unreasonable. As before suggested, I am brought to the conclusion that it cannot be said, as counsel for plaintiff insists, that the Commission acted wholly without jurisdiction to make the order and that it is for that reason unlawful. No attempt has been made to establish that it actually is confiscatory in the sense that it would deprive the plaintiff of a proper return on the value of its property devoted to the service. On the record as made it must be said that plaintiff has not established, with the requisite degree of certainty, its right to the relief sought."

A decree was entered in conformity with the trial court's opinion.

Plaintiff appeals and contends that the order of June 27, 1938, *supra*, should be set aside because (1) if the order be regarded as made solely in the exercise of the power to remove discrimination it is (a) beyond the power conferred on the Commission by the Michigan statute which power is limited to elimination of discrimination pertaining to intrastate operations solely; (b) inclusive of rates which are not competitive and hence discrimination cannot exist in respect thereof. (2) Whether the order is regarded as made in the exercise of the power to remove discrimination or to make rates by comparison or both it is (a) arbitrary and unreasonable in excluding in substance from any real consideration the many facts and circumstances as to the dissimilarities in the rendering of interstate service and intrastate service and hence in violation of § 1 of the Fourteenth Amendment to the Constitution of the United

States; (b) without substantial testimony to support it inasmuch as the evidence showing many and weighty dissimilarities of conditions is not conflicting and there is no countervailing evidence and hence the order exceeds the authority of the Commission under the Michigan statutes which is to hear evidence and act thereon and is violative of the due process of the Fourteenth Amendment to the Constitution of the United States; (c) not made "with reference exclusively to what is just and reasonable as between the carrier and the public in respect of domestic business" but takes the interstate business into consideration as well and hence is violative of the Fourteenth Amendment to the Constitution of the United States; (d) a sudden shift or departure from the basis heretofore consistently and continuously adopted and pursued by defendant Commission in the regulation of the business and rates of plaintiff treating all business in Michigan as a whole and fixing intrastate toll rates to produce more than the intended return from the intrastate business as a whole and the exchange rates correspondingly less and hence is violative of the due process clause of the Fourteenth Amendment to the Constitution of the United States.

It is contended on the part of the Commission that the legislature possesses sovereign power to fix rates for public utilities and to prevent unjust discrimination in rates charged; that such legislative power has been expressly delegated to the Commission, a fact-finding body; that under the proceedings taken by the Commission the telephone company was afforded a full opportunity to a hearing and later



MICHIGAN BELL TELEPH. CO. v. MICHIGAN PUB. SERV. COM.

a judicial review of those proceedings; that the rate established is not so low as to amount to confiscation of the telephone company's property; and that the findings of the Commission are supported by competent evidence.

In our opinion the principal question involved in this case is to determine whether the findings of the Commission are supported by competent evidence.

The sections of the so-called telephone act, Act No. 206, Public Acts 1913, being 2 Comp. Laws 1929, § 11700 et seq. Stat. Ann. 22.1441 et seq. applicable to the present problem are as follows:

"Section 3. All persons, copartnerships, or corporations doing a telephone business within this state are required to furnish reasonably adequate service and facilities for the use of their lines by the public. All charges made for any service rendered, furnished or performed, or to be rendered, furnished, or performed within the state by any telephone company shall be reasonable and just, and every unjust and unreasonable charge for such service is prohibited and declared to be unlawful; and the Commission shall have power to make, alter, amend, or abolish any rate or charge for any service, and may regulate by rules or orders any service or facility; and it shall likewise prescribe the standard of construction and equipment that shall be maintained by any person, copartnership or corporation maintaining a physical connection between the lines and facilities of any such person; copartnership, or corporation, and the lines and facilities of

any other person, copartnership, or corporation.

"Section 4. If any telephone company doing business within this state shall directly or indirectly by any special rate, rebate, drawback, or other device, charge, demand, collect, or receive from any person or persons, copartnership, or corporation a greater or less compensation for any service rendered, furnished, or performed than it charges, demands, collects, or receives from any other person or persons, copartnership, or corporation for rendering, furnishing, or performing for him or them a like contemporaneous service, such telephone company shall be guilty of unjust discrimination which is hereby prohibited and declared to be unlawful. . . .

"Section 5. It shall be unlawful for any telephone corporation doing business within this state to make or give any preference or advantage to any person, copartnership, corporation, or locality, or subject any person, copartnership, corporation, or locality to any prejudice or disadvantage in any respect whatever. . . .

"Section 11. The Commission shall, acting upon its own motion . . . have authority to hear and determine all complaints against the practices, rates, tolls, rentals, or charges . . . by persons, copartnerships, or corporations within the terms of this act. . . .

"Section 14. Any telephone company or other party in interest, being dissatisfied with any final order of the Commission made in any proceeding under this act, may within thirty days from the issuance of such order and notice thereof, commence an action in the circuit court in chancery against

## MICHIGAN SUPREME COURT

the Commission as defendant to vacate and set aside any such order on the ground that . . . the rate or rates, charges, joint rate, or rates fixed are unlawful or unreasonable. . . .

"Section 18. In all actions under this section the burden of proof shall be upon the complainant to show by clear and satisfactory evidence that the order of the Commission complained of is unlawful or unreasonable, as the case may be."

[1] Under § 18, *supra*, the burden of proof is upon the telephone company to show that the order of the Commission is unlawful and unreasonable. In our opinion the Commission was only required to determine upon competent evidence that the rates charged for intrastate toll service were excessive or discriminatory and it could limit its inquiry to that particular branch of the service, providing evidence was adduced to sustain its findings.

[2-4] At the hearing before the Commission, nearly all the evidence introduced by the telephone company related to differences in the rendition of interstate and intrastate service. It introduced evidence tending to show that in 1937 the average revenue per message from interstate business was \$1.555 and from intrastate business \$.318; that approximately 80 per cent of the Michigan Bell Telephone Company's intrastate business is between termini less than 42 miles apart; that but 1½ per cent of the Long Lines interstate business is under 42 miles; that during this same period the average rate miles per message were 228 miles for interstate messages and 30.9 miles for intrastate messages; that the charges for station-to-station day

messages of 3-minute duration transmitted these distances are 90 cents in the case of the interstate and 30 cents in the case of the intrastate; that the duration of the call on interstate messages is greater than that of intrastate messages; and that these are factors which enter into the revenue derived from a given schedule of rates.

It was also shown by the telephone company that the use made of the circuit is an important factor in determining a rate schedule; that during the year 1937 the Long Lines handled 54,000,000 messages entailing 223,368,000 minutes of conversation time, while during the same period the Michigan Bell Telephone Company transmitted 27,000,000 messages, both intrastate and interstate, involving 81,540,000 minutes of conversation; that the circuit cost per mile is not the same for the interstate circuits as for the intrastate circuits because as the size of circuit groups increases, the cost per circuit tends to decrease; and that the revenue of the Long Lines from "other than telephone uses" is \$14,851,013 as against \$74,334,314 from telephone uses, while that of the Michigan Bell Telephone Company for the same period is \$170,037 as against \$7,754,827.

Evidence was introduced upon the part of the Commission by a telephone engineer employed by the Commission; a toll traffic supervisor, a telephone transmission engineer, a telephone revenue engineer, and an auditor employed by the telephone company; and several telephone patrons as well as an exhibit of the comparable rates which shows that the interstate and intrastate rates are the same up to and including 42 miles of service and that

MICHIGAN BELL TELEPH. CO. v. MICHIGAN PUB. SERV. COM.

from then on the intrastate rates are consistently higher.

A recent case of much importance is that of *Bell Teleph. Co. v. Public Utility Commission* (1939) 135 Pa Super Ct 218, 28 PUR(NS) 266, 276, 5 A (2d) 410, 418, dismissed on appeal 309 US 30, 84 L ed 563, 32 PUR(NS) 304, 60 S Ct 411. That case involved an appeal by the telephone company from an order of the Pennsylvania Public Utility Commission directing it to revise its intrastate toll rates for distances exceeding 36 miles so as to conform to the rates charged by the American Telephone and Telegraph Company which was a user of the Pennsylvania Bell Telephone Company's facilities for service over comparable distances in interstate service. The facts in the above case are almost identical to the facts involved in the case at bar. There was almost identical evidence to support the finding of similarity between the interstate and intrastate service in the two cases. It consisted in a showing that for the use of the same facilities, the customer who uses them in intrastate toll service must pay more than the customer who uses them in interstate toll service. The court said:

"If the interstate rates are themselves just and reasonable and are not below the fair and reasonable rate demandable for the service, by reason of some special circumstance such as was present in the *Eubank Case* [*Louisville & N. R. Co. v. Eubank* (1902) 184 US 27, 46 L. ed 416, 22 S Ct 277], it is hard to see how there can be any discrimination against interstate traffic and in favor of intrastate traffic by an order of a state Commission directing

intrastate rates to conform to interstate rates. . . .

"We must assume, in the absence of all proof to the contrary, that the rates so established by the American Company and approved by the Federal Communications Commission are just, fair, and reasonable to the utilities as well as to the public. . . .

"Nor is the order invalid because it is not alternative in form, directing appellant either to raise its interstate rates or lower its intrastate rates, to conform. . . .

"If an unjust and unreasonable discrimination against intrastate service exists, which can be corrected only by a reduction of the intrastate rates to conform with the just and reasonable rates established for interstate service, the Public Utility Commission has the power to order it."

As we examine the facts in the case at bar, it is apparent that plaintiff, in making a comparison of the various items that go towards the making of rates, compares the whole nation-wide business of the Long Lines to the intrastate business of the Michigan Bell Telephone Company, while the comparison the Commission made was between the interstate business (jointly conducted by the Michigan Bell Telephone Company and the Long Lines to and from points within Michigan limits) and the intrastate business conducted by the Michigan Bell Telephone Company. The fact that the volume, use of economical appliances, density of traffic, etc., of the Long Lines are different from the same factors in the Michigan Bell Telephone Company business does not meet a claim that the interstate business of the Michigan Bell Telephone Company is rendered

## MICHIGAN SUPREME COURT

under the same conditions as the intrastate business of the Michigan Bell Telephone Company. In its showing, the plaintiff does not show that the advantages possessed by the Long Lines are beneficial to the Michigan Bell Telephone Company. In our opinion plaintiff has failed to show any substantial difference between the interstate business of the Michigan Bell Telephone Company (conducted jointly with the Long Lines) and its intrastate business.

Plaintiff cites the case of *Smith v. Illinois Bell Teleph. Co.* (1930) 282 US 133, 75 L ed 255, PUR1931A 1, 51 S Ct 65, to show that the only proper basis of any rate order is a determination of the value of the property used in the intrastate business, segregated from the property used in the interstate business. Such a basis is proper when confiscation is charged, as was held in that case, but in the case at bar there is no charge of confiscation, hence the case is not controlling on the issues involved here.

In our opinion, the findings of the Commission are supported by competent evidence. Upon review of such an order, the order will stand if there is substantial evidence supporting the conclusions of the Commission. See *Detroit v. Michigan R. Commission*, 209 Mich 395, PUR1920D 867, 177 NW 306. We must assume that the rates established by the Federal Communications Commission for interstate tolls are fair and reasonable. In the case at bar evidence was produced which had a tendency to show that the telephone company charges higher tolls within the state than it requires for the same service interstate, with the use of the same facilities and for com-

parable distance. For example, the air distance from Detroit to Niles, Michigan, is 171 miles and the toll for a long-distance call from Detroit to Niles is \$1 (initial period charge), while the air distance from Detroit to South Bend, Indiana, is 173 miles and the rate is 75 cents.

Mr. Joseph Bell, toll traffic supervisor of the telephone company, testified as follows:

*Mr. Pugh:* The fact is that in the schedule of rates adopted by the AT & T, and the schedule adopted by the Michigan Bell Telephone Company, there is a differential in the charge made for the same mileage between interstate and intrastate calls?

*Mr. Bell:* Yes, sir.

*Mr. Pugh:* Although the same facilities may be used?

*Mr. Bell:* Yes, sir.

*Mr. Pugh:* In placing the messages over exactly the same facilities?

*Mr. Bell:* Yes.

*Mr. Pugh:* On intrastate calls and interstate calls?

*Mr. Bell:* Yes. . . .

*Q.* But essentially, the service of hauling a message from Clare to Detroit, whether that message be continued onward over the Long Lines to Toledo, is essentially the same sort of service as would have been the operation of hauling a message from Clare to Detroit for termination in Detroit, is it not, so far as the characteristics of the service performed, and the facilities used, and the results obtained are concerned? *A.* Yes.

*Q.* For which the Michigan Bell Telephone Company in one instance charges a higher rate if the entire call is completed within the state than it

MICHIGAN BELL TELEPH. CO. v. MICHIGAN PUB. SERV. COM.

would if the call were to extend beyond the state? A. So it would appear, yes, sir.

[5] It is next urged that the change of method in rate fixing, adopted by the Commission, was so radical as to deny to plaintiff "procedural due process of law." Act No. 206, Public Acts 1913, empowers and expressly authorizes the Commission to inquire into the reasonableness of rates charged by the telephone company for any class of its service. In the case at bar, the telephone company was served with an order which informed it of the nature of the complaint made concerning its tolls for intrastate long-distance service. It was accorded a hearing before the Commission and when the Commission entered an order establishing a new rate schedule plaintiff appealed in the manner provided by statute. Under such circumstances there was no denial of due process of law.

[6] Upon review in the circuit court, the burden rests upon the telephone company to show by clear and satisfactory evidence that the order of the Commission complained of is unlawful or unreasonable. The trial court found that the Commission's order should be regarded as one for the fixing of intrastate toll rates. The trial court also determined that the telephone company had not established its right to any relief in a chancery court. The record sustains and we are in accord with such a finding.

The decree of the trial court is affirmed, with costs to defendant.

Bushnell, Chandler, North, McAlister, and Wiest, JJ., concurred with Sharpe, C. J.

BUTZEL, J., concurring: I concur in the foregoing opinion. Plaintiff makes no claim that the lowering of the intrastate rates to the level of interstate rates will result in confiscation. Discrimination was shown in the charges to points outside the state, the toll to which was lower than to points within the state, both being equidistant from the point where the messages originated, although practically a like contemporaneous service was given and to a considerable extent, the same terminals, operators, maintenance, and other facilities were used. The order to show cause issued by the Commission did not preclude the company from showing that the lowering of the rates would not give it a reasonable compensatory return on its entire intrastate business. Appellant did show that the interstate company, through its larger and more efficient facilities, handled a greater volume of business at a smaller cost; that its heavier wires permitted more extensive and diversified contemporaneous uses; that it enjoyed a far larger percentage of additional business through nontelephonic uses of its wires, and that it had other advantages that did not accrue to the intrastate company. However, it did not show, nor was it prevented from showing, that the total return from its entire intrastate business would not furnish a compensatory return on the investment. It seemed to intimate that it had some rights in the rate fixed in 1936. However, a rate is always subject to revision.

Great stress is placed by the plaintiff on the case of *Smith v. Illinois Bell Teleph. Co. supra*. In that case the telephone company claimed con-



## MICHIGAN SUPREME COURT

fiscation and the entire rates of the company were examined. In the present case, confiscation is disclaimed by plaintiff and it was not precluded from going into the question as to whether the new rates afforded a compensatory return. The burden of proof was on plaintiff. However, it was confronted with the very exorbitant cost, in excess of a million dollars, with the length of time and the amount of effort it would take to make another exhaustive rate examination before the Michigan Public Service Commission. It is impossible from this record to ascertain the various elements of costs, revenues, and other factors that should be apportioned or allotted to interstate or intrastate, including local exchange business. These elements are closely integrated. The state has no control over the interstate rates as fixed by the Federal Communications Commission. The plaintiff did show that the equalizing of the intrastate long distance rates figured on the basis of the 1938 business and after the adjustment of the then existing rate of income tax would cost the company \$465,000. Our present inquiry must be for that year, although in the case of Bell Teleph. Co. v. Public Utility Commission (1939) 135 Pa Super Ct 218, 28 PUR (NS) 266, 5 A(2d) 410, the court took judicial notice of the fact that 1937 was a poor business year. By the same token, it might be said that conditions had just begun to improve in 1938. The record also indicates that rates were lowered during certain hours and days in order to attract business and the attorney general argues that the lowering of intrastate rates would result in increased busi-

39 PUR(NS)

ness which would bring in tolls during the slack periods and furnish additional revenue up to a certain point. While the record indicates that the Southern Telephone & Telegraph Company, one of the associated Bell Companies, reduced its intrastate rates in Louisiana and Georgia to the level of the interstate rates, a comparison between the states is of little value unless all elements entering into the problem in each state are shown. Smyth v. Ames (1898) 169 US 466, 42 L ed 819, 18 S Ct 418. Notwithstanding a slight difference in the laws and a much more complete record in the instant case, the case does not differ in its material aspects from that of Bell Teleph. Co. v. Public Utility Commission, *supra*, an appeal from which was subsequently dismissed by the United States Supreme Court, 309 US 30, 84 L ed 563, 32 PUR (NS) 304, 60 S Ct 411, because there was no Federal question involved, as there was no denial of due process, when on appropriate hearing the state court determined that there was evidence to sustain the finding. The court further stated that as long as the rates established were not confiscatory and did not in any way cast a burden on interstate commerce, the state court had a right to decide what constitutes an unreasonable discrimination in favor of interstate as against intrastate traffic.

Plaintiff, however, claims that it was denied procedural due process; that the order of the Commission was simply an "ipse dixit" judicial fiat and not based on evidence and that it lacked any basis whatsoever. We do not agree that these claims are justi-

MICHIGAN BELL TELEPH. CO. v. MICHIGAN PUB. SERV. COM.

fied. The instant case differs from *West Ohio Gas Co. v. Ohio Pub. Utilities Commission* (1935) 294 US 63, 79 L ed 761, 6 PUR(NS) 449, 55 S Ct 316, where there was no basis whatsoever for making the reduction. In the present case, the interstate rate for similar contemporaneous service together with the other facts shown was a sufficient basis for the determination. Plaintiff offered no testimony whatsoever that tended to show it would not obtain a compensatory return on its investment. It was not denied the opportunity to do so. The order to show cause required the company to cease and desist from the "collection of unreasonable and unjust charges from intrastate toll message service," etc. *American Telephone and Telegraph Company*, the interstate company, through its ownership of 99.99 per cent of stock has direct control of plaintiff. *People ex rel. Attorney General v. Michigan Bell Teleph. Co.* 246 Mich 198, PUR1929B 455, PUR 1929E 27, 224 NW 438. The companies are also closely interwoven through the use of joint facilities. They must be considered together for regulatory purposes, notwithstanding that the forms of separate entities are maintained. There is no claim or right of the Michigan Public Service Commission to regulate interstate rates which must be accepted as fixed by the Federal Communications Commission. While the accounting for

the two companies is kept separately, nevertheless, the companies use the same terminals, operators, maintenance and many other facilities. There is such an integration of them so as to make them interdependent and to give each service mutual benefits as if they constituted one company.

In answer to the alleged discrimination in favor of interstate over intrastate customers, the company sought to show that substantial differences existed between the two services. While it is apparent that some differences exist, the finding of discrimination is amply substantiated by the record. Failing to prove a dissimilarity between the services, the burden of proof was then upon the plaintiff to show that it would not receive a reasonable compensatory return on its entire investment under the order. This it failed to do. It still has such opportunity as to rates in the future, although the costs in time, money, and effort may make it prohibitive, and now undesirable in view of the better business conditions that exist. I cannot accede to the proposition that plaintiff has been denied procedural due process of law.

The decree of the trial court should be and is affirmed, with costs to defendant.

Bushnell, Chandler, and McAllister, JJ., concurred with Butzel, J.

Potter, J., took no part in this decision.

NORTH DAKOTA PUBLIC SERVICE COMMISSION

NORTH DAKOTA PUBLIC SERVICE COMMISSION

## Re Theel Brothers Rapid Transit

[Case No. M-653, Sub. No. 1]

*Monopoly and competition, § 66 — Carrier's protection — Regulated transportation.*

1. The statutory requirement that the Commission, in authorizing motor carrier service, consider the effect on other essential forms of transportation and existing transportation facilities in the territory, requires only that the Commission give consideration to regulated forms of transportation; shipper-owner transportation (not requiring a certificate of public convenience and necessity) and other private carriers are not included in the requirement of the statute, p. 127.

*Certificates of convenience and necessity, § 88 — Meaning of word "public."*

2. The use of the word "public" with respect to public convenience and necessity to be served by authorization of motor carrier service does not refer to all of the public, nor to any particular portion of it, nor is it the convenience and necessity of the applicant with which the statute is concerned, but public convenience and necessity refers rather to the convenience and necessity of a portion of the general public, p. 127.

*Certificates of convenience and necessity, § 88 — Meaning of "convenience."*

3. "Convenience" as used in a statute relating to certificates of public convenience and necessity is not used in an ordinary sense as synonymous with handy or ease of access, but in accord with its regular meaning of sufficiency and fitness; and public convenience refers to something fitted or suited to the public need, p. 127.

*Certificates of convenience and necessity, § 88 — Meaning of word "necessity."*

4. "Necessity" as used in a statute relating to certificates of convenience and necessity is not used in its ordinary sense as an indispensable requisite, but the word has a relative rather than an absolute inference; and no definition can be given that will fit all statutes, nor will its application always be the same under the same statute and a different set of facts, p. 127.

*Certificates of convenience and necessity, § 88 — Public convenience — Future developments.*

5. The future, as well as the present, must be considered, and reasonably foreseeable future developments must be anticipated, in determining whether public convenience and necessity require the operation of motor carrier service, p. 127.

[May 23, 1941.]

**A**PPPLICATION for extension of Class "A" certificate to include motor carrier service over a designated route; granted.

## RE THEEL BROTHERS RAPID TRANSIT

LARKIN, Commissioner: The above-entitled matter came to the attention of the Commission on May 26, 1940, was set for hearing on November 27, 1940, and later postponed, all interested parties were notified, and hearing held according to notice in the courthouse at Finley, North Dakota, on December 2, 1940, at which time and place the following appearances were entered:

Halvor L. Halvorson, Attorney, Minot, and Myer R. Shark, Devils Lake, in behalf of the applicant; C. J. Murphy, Attorney, Grand Forks, in behalf of the Great Northern and Northern Pacific Railway Companies, in protest; Franklin J. Van Osdel, Attorney, Fargo, for the Midnite Express, Inc., in protest; C. D. Aaker, Attorney, Minot, for the Dakota Transfer and Storage Company of Minot, in protest; Ray Kelly, Warwick, in his own behalf as the holder of Special Certificate No. 347, in protest.

Theel Brothers Rapid Transit of Rolla, North Dakota, a partnership, consisting of Carl R. Theel, Bruce K. Theel, and Robert Theel, is operating Class "A" Certificate No. 161 from Bottineau to Devils Lake and the intermediate towns of Starkweather, Cando, Arndt, Crocus, Rock Lake, Elsherry, Armourdale, Rolla, St. John, Belcourt, and Dunseith. The company petitioned the Commission for an extension of its Class "A" certificate to include motor freight service over a route from Devils Lake on Highway No. 20, via Tokio, Warwick, and Hamar, on Highway No. 15, via Tolna, Pekin, McVile, and Kloten, thence on Highway No. 32, via Aneta, Sharon, Finley, Pickert,

and Blabon, on Highway No. 38, via Hope, Colgate, Page, and Buffalo, thence on Highway No. 10 to Fargo, the operation of a truck on Highway No. 7 from Cooperstown to connect with trucks both morning and evening at the gas station  $1\frac{1}{2}$  mile west of Pickert where No. 7 connects with Highway No. 32, with closed-door operation between Page and Fargo, both ways.

Theel Brothers Rapid Transit has been operating for about five or six years. It makes daily connections with the Dakota Transfer and Storage Company in Devils Lake where it maintains a warehouse and offices.

The Dakota Transfer and Storage Company of Minot connects with the Midnite Express, Inc., at Grand Forks and operates a Class "A" service over Highway No. 2, west to the Montana state line, paralleling the main line of the Great Northern and serving all intermediate towns.

The Midnite Express operates daily service over No. 10, paralleling the main line of the Northern Pacific from Fargo to Dickinson, serving all intermediate towns; it also operates a line from Fargo to Minot over Highways No. 10 and No. 52 and another line north of Fargo to Grand Forks and the Canadian border.

The territory covered by the requested extension is considered one of the best farming territories in North Dakota, outside of the Red River valley.

Devils Lake is a jobbing center for the north central portion of the state. It is situated on the main line of the Great Northern Railway Company, with a branch line running north to Hansboro; another leaving the main

## NORTH DAKOTA PUBLIC SERVICE COMMISSION

line at Church Ferry and going to St. John. Another branch line runs south to Bedford where it connects with the branch line known as the Surrey-Fargo cutoff. Devils Lake is located 89 miles west of Grand Forks, also an important jobbing center.

All of the towns, except Coopers-town, in the proposed extension, are served by the Aneta branch of the Great Northern Railway Company. Cooperstown is served by a branch of the Northern Pacific Railway. On the Aneta branch of the Great Northern, a train leaves Fargo each morning at 7 o'clock and arrives at Devils Lake at 1:15 P. M.; leaving Devils Lake on the return trip at 2 o'clock P. M., and arriving at Fargo at 7:15 P. M. This service is daily, except Sunday, handling passengers, less than carload freight and express. There is also a triweekly freight service between Fargo and Devils Lake.

Theel Brothers' proposed time schedule calls for leaving Devils Lake at 8:30 A. M.; McVillage at 10:35 A. M.; Hope at 1:15 P. M., and arriving at Fargo at 3:20 P. M. It leaves Fargo at 7:00 P. M., arrives at Pickert at 10:20 P. M.; Kloten at 12:35 A. M.; Devils Lake at 3:35 A. M.; Rolla at 8:15 A. M.; Bottineau at 10:40 A. M., leaving Bottineau at 12 noon and arriving at Elsbury at 2:25 P. M., and Devils Lake at 5:40 P. M.

Robert Theel testified that there has been a considerable demand by shippers in Devils Lake and the towns mentioned in the application for the proposed service. He stated that he had made several investigations, contacting many of the businessmen in the various towns mentioned, and it

was his opinion that the service proposed would be a convenience and necessity in that territory. In Fargo there is a large number of jobbers and accessory warehouses who carry a complete line of merchandise and there is a constant flow of shipments into the territory covered by the proposed extension, and to the territory between Devils Lake and Bottineau now served by the applicant.

Owing to the large number of witnesses, it would make this decision too long to include the statements of each one and inasmuch as they testified in a like vein for each particular kind of business, the testimony has been grouped as much as possible.

In the territory now served by the applicant, three auto and implement dealers in Rolla and two in Cando testified they all needed early morning service and that the public demanded more rapid service than now available. They also wanted direct truck service from Fargo with no transfers at Grand Forks and Devils Lake in order to avoid loss due to damage.

[Further discussion of testimony omitted for lack of space.]

The large number of witnesses and the volume of testimony in this case speak well of the interest, both pro and con, that the present application has engendered in the territory of the proposed service. Both the applicant and protestants were sincere in their efforts to be helpful to the Commission in reaching a conclusion to the best interests of the state.

Those who testified in favor of the extension had in mind some convenience and need that they as businessmen had for the service. It is impos-



## RE THEEL BROTHERS RAPID TRANSIT

sible and impracticable at such a hearing to secure as witnesses all those who would have need of the service. The same applies to those who are opposed to the service. The showing is convincing that there will be a considerable use of the proposed service and that there is need for a regular truck service through the territory involved supplementing the present rail service.

[1] It is necessary under the statute that the applicant prove, and the Commission find, that public convenience and necessity will be served by the granting of the extension here petitioned for. In addition, the statute requires that the Commission take into consideration existing travel on said route, the increased cost of maintaining the highway concerned, the effect on other essential forms of transportation, and existing transportation facilities in the territory for which a certificate is sought. In the event that it appears from the evidence that the service furnished, or that could be furnished by existing transportation facilities, is reasonably adequate, the Commission shall not grant such certificate. As the Commission views this requirement, it is only necessary to give consideration to regulated forms of transportation. In other words, shipper-owner transportation, not requiring a certificate of public convenience and necessity under our statutes, and other private carriers, are not included in the requirement of the statute.

[2] The use of the word "public" does not refer to all of the public, nor to any particular portion of it. Nor is it the convenience and necessity of the applicant with which the statute is

concerned. Public convenience and necessity refers rather to the convenience and necessity of a portion of the general public.

[3] "Convenience" is not used in an ordinary sense as synonymous with handy or ease of access, but in accord with its regular meaning of sufficiency and fitness, and public convenience refers to something fitted or suited to the public need.

[4] "Necessity" is not used in its ordinary sense as an indispensable requisite. If that were the case, no certificate of public convenience and necessity could ever be granted. Any improvement, which is highly important to the public convenience and desirable for the public welfare, may be regarded as necessary. Inconvenience may be so great as to amount to necessity. The word has a relative rather than an absolute inference and no definition can be given that will fit all statutes, nor will its application always be the same under the same statute and a different set of facts.

[5] The future, as well as the present, must be considered, and reasonably foreseeable future developments must be anticipated. The witnesses have testified in this case as to public convenience and necessity, and were obviously considering those of their customers who were dependent upon prompt service, especially in repairs for trucks and farm machinery. In that sense the number of witnesses might well be multiplied many times. Many businessmen are today unable to carry large inventories of merchandise, and it is essential that more rapid means of transportation be provided to satisfy the requirements of the

## NORTH DAKOTA PUBLIC SERVICE COMMISSION

communities. Most farmers are using trucks, tractors, combines, and machinery of all kinds. Much of the machinery is old and subject to frequent breakdowns. During times of planting and harvest, prompt delivery of repair parts with the least possible cost is essential to an efficient and economical production, and since by far the larger part of the farmers' products is transported by rail, that form of transportation benefits directly by an increase in an efficient and economical production.

No showing was made by the opponents that two trucks a day traversing the route under consideration, as proposed by the petitioner, would have any harmful effect upon the highways or increase the cost of maintaining them. It is the judgment of the Commission, relying upon its experience in such matters, that no such showing could have been made.

The present rail service is not reasonably adequate for needs of the various communities upon this route, nor has any proposal been advanced to make such service reasonably adequate. The needs of the communities to be served by the petitioner are such that a daily Class "A" common carrier truck service will give the people in the communities a service equal to most other well populated sections of the state and one which will be adequate for all purposes.

From the entire record and after due consideration of the testimony in this case, the Commission herewith enters its findings of fact and conclusions of law:

### *Findings of Fact*

1. That the applicant is able, willing, and ready to perform public service as a Class "A" common motor carrier operating over a fixed route on schedule time between fixed termini.

2. That the applicant is now a Class "A" common carrier operating northwest from Devils Lake to Bottineau; that the proposed service will constitute an extension of his route from Devils Lake to Fargo, via Tokio, Warwick, Hamar, Tolna, Pekin, McVile, Klotten, Aneta, Sharon, Finley, Pickert, Blabon, Hope, Colgate, Page, and Buffalo, with closed-door service between Fargo and Page, and extension of the service via North Dakota Highway No. 7 to Cooperstown.

3. That there is now no Class "A" common carrier motor service over this route.

4. That the present and prospective rail service in said territory does not reasonably and adequately serve the communities on the proposed route.

5. That the proposed service will not increase the cost of maintaining the highways of this state, or be detrimental to existing travel on said route, or existing transportation facilities in the territory to be served.

6. That public convenience and necessity require the proposed service.

7. That the applicant has established public convenience and necessity on said route.

### *Conclusions of Law*

1. That a certificate of public convenience and necessity should be issued to the applicant as prayed for.

# CHEVROLET TRUCKS

LEAD THE  
NATION IN  
ECONOMICAL  
TRANSPORTATION



Truck operators, large and small, buy more Chevrolet trucks than any other make, year after year.

Small wonder that they are doing it this year! For Chevrolets for 1941 attain a new high in all-round value. They are "tops" for total dependability—engineered to haul your loads with the speed that these fast-moving days require . . . and they are priced to cost you less than any other trucks

in the biggest-selling low-price field.

*Truck operators everywhere have decided that Chevrolets are first choice for making "DELIVERIES P.D.Q."—powerfully, dependably, quickly.*

To solve your delivery problems, and solve them efficiently and economically, follow this nationwide swing to Chevrolet. Your Chevrolet dealer is ready to give you a convincing demonstration, any time you say.

CHEVROLET MOTOR DIVISION, General Motors Sales Corporation, DETROIT, MICHIGAN

## "THRIFT-CARRIERS FOR THE NATION"

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# Industrial Progress

*Selected information about manufacturers, new products, and new methods. Also news on utility expansion programs, personnel changes, recent and coming events.*



## Minnesota Power & Light Co. Announces Expansion

**T**HE Minnesota Power & Light Company plans to install a 33,500 hp generating unit at the Duluth steam electric plant of the company, according to a recent announcement by President M. L. Hibbard.

The increased plant capacity is being added to meet unprecedented load growth brought on by defense industries. The new generator is a duplicate of the first unit installed in this plant in 1931. When completed in 1943 the total plant capacity will be 67,000 hp.

A 17,000 hp steam electric plant in Superior will be completed in 1942 by the Superior Water, Light and Power Company. Both new units will make available to the interconnected transmission systems of the two companies at the head of the Lakes 50,000 hp additional.

## 1,000,000-Volt X-Ray Machines

**T**HE first 1,000,000-volt industrial x-ray machines for boiler-drum and pressure-vessel inspection—capable of penetrating eight inches of steel in good commercial time—have been made by the General Electric X-Ray Corporation, Chicago. One has been installed by the Babcock & Wilcox Company in its Barberton, Ohio, plant; the other is for the Chattanooga boiler shops of Combustion Engineering Company. Still other units are now under construction at Chicago.

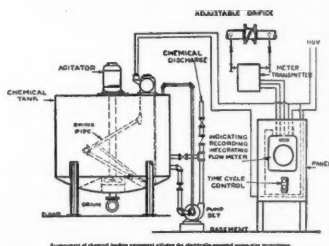
The new x-ray units—operating at 2½ times the maximum voltage previously available in industrial equipments—are like the one installed in the Schenectady Works Laboratory of the General Electric Company a few months ago. They are extremely compact in size, weighing only about 1500 pounds and measuring less than five feet in height and three feet in diameter. The unit incorporates a gas-insulated (Freon) resonant transformer within which is a sealed-off multisection x-ray tube, all contained in a grounded steel tank. The x-rays are generated from a target

mounted in the end of an extension chamber projecting out from one end of the tank. The unit is rated at 1,000,000 volts and 3 milliamperes continuous current. It produces energy equal to that of \$90,000,000 worth of radium.

## Proportions Chemicals for Water Treating

**T**HE Cochrane electrically-operated chemical proportioner was developed particularly for proportioning a number of individual chemicals to water conditioning systems in accordance with makeup requirements.

In this combination a swing-pipe chemical



*Arrangement of chemical feeding equipment*

proportioner is controlled from a Cochrane electric flow meter provided with contacts on the integrator train. When the predetermined quantity of water has passed through the meter orifice, the integrator closes a contact in the electrical circuit, including a time-cycle relay. Time for which the proportioning motor is to run is controlled from a panel-front knob for each chemical.

Details of proportioner design and construction and applications, with flow diagrams, of Cochrane flow meters to typical water conditioning control applications are described in detail in Publication 3015, issued by Cochrane Corporation, Philadelphia.

## To Double Capacity

**T**HE Houston Lighting and Power Company, Houston, Texas, is contemplating an expansion program. This will double its capacity, according to a recent report. It was estimated that new construction plans involved the expenditure of \$7,500,000.

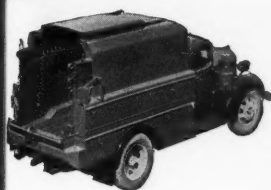
### 70 MASTER-LIGHTS

- Electric Portable Hand Lights.
- Repair Car Spot and Searchlights.
- Emergency (Battery) Floodlights.

**CARPENTER MFG. CO.**  
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MASTER-LIGHT MAKERS



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# American

## DELUXE LINE CONSTRUCTION

# Bodies

*They "Stand  
the Gaff"*

★ The neat trim lines and attractive finish convey no adequate impression of the sturdy construction that prevails all through every American body. Built all of steel, with essential joints welded to form practically one piece, American bodies give the maximum of service with minimum weight. They are continually surprising their owners with the long years they stay efficiently on the job.

*Write for new descriptive book just off the press.*

## THE AMERICAN COACH & BODY CO.

WOODLAND AVENUE AT EAST 93RD STREET  
CLEVELAND, OHIO

*Standard Equipment  
for Public Utilities*



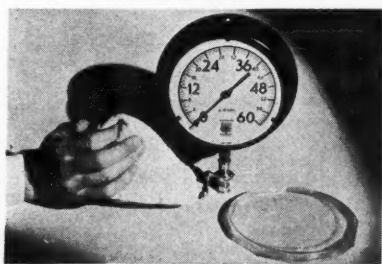
## Union Electric Orders Additions to Plant

**T**HE addition of 80,000 kw capacity at the Venice plant of the Union Electric Company of Missouri, recently reported, will increase new capacity at this plant to 240,000 kw.

The first section of the Venice addition, housing two 40,000 kw generators is nearing completion and another new 80,000 kw unit is scheduled for installation in the fall of 1942. The latest order, also for an 80,000 kw machine, will be ready by June, 1943.

## Plastic Gauge Dial

**A** PLASTIC gauge dial has been developed by the Ashcroft Gauge Division of Manning, Maxwell & Moore, Inc., Bridgeport, Conn., for use instead of aluminum or brass



*New Dial Face Easily Cleaned*

gauge dials. It is estimated that the yearly savings of aluminum to be effected by substituting plastic dials will be sufficient to supply the aluminum for 350 airplane engines for trainer planes for our Air Corps.

The makers claim several advantages for this new plastic gauge dial. The face of any pressure gauge equipped with the plastic dial can be washed. The plastic dial will not warp, corrode, rust, or crack and costs no more than the metal type.

## Toaster with Silent Timer

**A** SIMPLIFIED and silent timing device and a new exterior styling are incorporated in a new automatic toaster announced by the heating device section of the General Electric Company in Bridgeport, Conn.

Replacing the old ticking clock timer is a

silent thermal timer with no moving parts. The only sound heard is a slight click about half a minute before the end of the toasting cycle.

At any time during the toasting operation the toast can be lifted by tripping the control handle.

## Gas Appliance Standards

**T**wo new sets of American Standards covering portable gas baking and roasting ovens (Z21.28-1941) and furnace temperature limit controls and fan controls (Z21.29-1941) have been adopted by the American Standards Association as American Standard. Recommended revisions to requirements for semi-rigid gas appliance tubing and fittings (Z21.24-1941) also have been adopted. All become effective on January 1, 1942.

Adoption of these two new American Standards brings the total number of different types of gas equipment so covered to 41. Practically every gas appliance for every domestic heating use is included, in addition to a number of commonly used commercial types.

Sponsored by the American Gas Association, this standardization program is in keeping with early efforts of the gas industry to insure its consumers that gas equipment they purchase will be safe, durably and substantially constructed, and capable of efficient and economical operation. It is further enhanced by a rigorous testing, certification and inspection service established at the American Gas Association Testing Laboratories in Cleveland, Ohio and Los Angeles, Calif.

## Fluorescent Power Unit

**A** NEW power unit for fluorescent fixtures which provides instantaneous light when switched on, has been developed by National Transformer Co., Paterson, N. J. The new unit eliminates the need for starters, starter switches, starter sockets and compensator, according to the manufacturer, thus stabilizing lamp life and removing the major source of trouble in fluorescent lighting.

For further information, write the manufacturer, National Transformer Corporation, 224-232 Twenty-first Avenue, Paterson, N. J.

## Curler Has Swivel Plug Cord

**A** SWIVEL plug cord to eliminate kinking and twisting of the cord is a feature of a new electric hair curler manufactured by the Knapp-Monarch Co., St. Louis, Mo. A large natural maple handle offers a comfortable grip, the plastic button remains cool, and the removable plug leaves the iron free of the cord if desired. List price, \$2.95.

The company also offers an electric curler with many of the features of the more expensive model. This curler makes any size curl, has convenient switch and walnut handle. The list price is \$1.50.

### MARTENS & STORMOEN

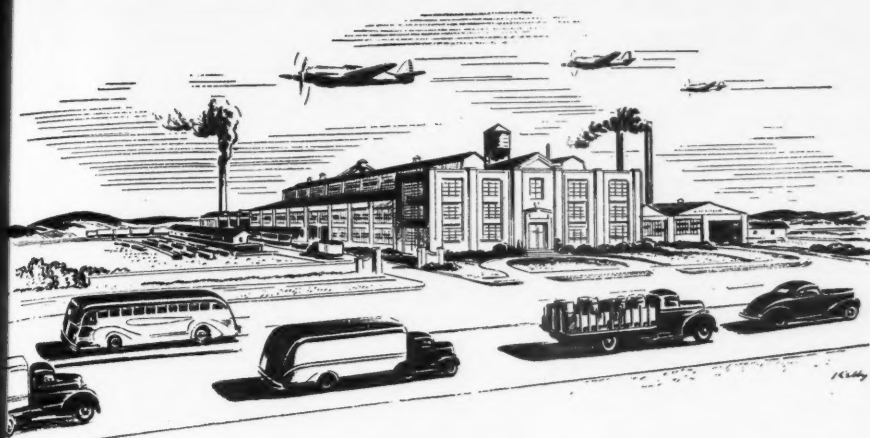
successors to  
**THONER & MARTENS**

*Disconnecting and Heavy Duty Switches*

15 Hathaway St.,

Boston, Mass.

*Mention the FORTNIGHTLY—It identifies your inquiry*



## THIS IS NO TIME TO WASTE POWER

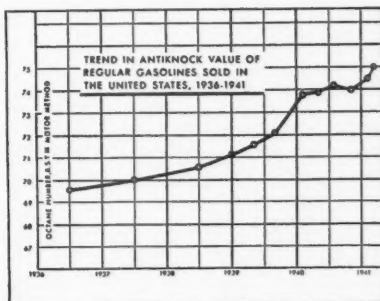
**T**ODAY'S industrial production schedules call for tremendous expansion—expansion that has created a host of new transportation problems. In the solution of these problems the extra power that is available in today's improved gasolines can be of help. Business executives charged with the responsibility of moving men and materials quickly and efficiently should consider these facts:

1. Petroleum refiners have made extra power available by increasing the anti-knock quality (octane number) of regular gasoline as shown on the chart at right.
2. Whether or not this extra power can be put to full use depends largely upon the ability of the user's equipment to take advantage of it.
3. Many fleet operators have been able to reduce their cost per ton-mile or passenger-mile by making better use of today's better gasolines in modern high compression engines or in older engines that have been modernized to take advantage of improvements in fuel. In addition to gains in mileage, operators often realize considerable gains in operating speed, schedule time or payload.

Ethyl engineers would like to help you get the most from every gallon of gasoline you buy. Just

as they cooperate with the research men of the automotive and petroleum industries to help produce better fuels and engines, they are working with commercial fleet operators in order that technical improvements may benefit practical operation.

For detailed information about this service, write to Fleet Division, Ethyl Gasoline Corporation, Chrysler Building, New York City.



*Better and more economical transportation through*  
**ETHYL RESEARCH and SERVICE**

## Safety Goggles Protect and Correct Vision

**S**EVEN different styles of safety goggles fitted with Super Armorplate lenses which can be ground to prescription are announced by the American Optical Company. Both eye-correction as well as eye-protection for industrial workers with defective vision are thus provided by these new goggles.

These special protective-corrective safety goggles, according to the announcement, include spectacle and side-shield types for different kinds of eye hazards, and the extra-strong, hardened Super Armorplate lenses can be obtained in either clear white or Calobar and Crookes glare protection glass.

## Iron Has Dual Soleplate

**P**ETIPOINT, a new and completely different air-cooled electric iron with a dual soleplate, is being introduced by the Edmilton Corporation of Milwaukee. Petipoint irons ordinary flatwork with the full-sized soleplate. A smaller soleplate, set at an up-tilted angle on the rear of the iron, irons ruffles, tucks, gathers and corners.

Actually air-cooled, Petipoint has four horizontal fins that dissipate the unused heat to the sides, leaving the iron top and handle cooler. Petipoint is rolled on its side when not in use—eliminating lifting, and the danger of the up-ended iron toppling and falling to the floor.

## Standards for Wood Poles

**T**HE six American Tentative Standards covering specifications for wood poles, several of which were approved by the American Standards Association as tentative in 1931 and the rest in 1933, have now been reviewed by the ASA committee and approved by the ASA as full American Standards. In reviewing the standards, the committee found that the general principles of the standard requirements have been universally recognized as a satisfactory basis for the selection of poles. Covering as they do northern white cedar poles, western red cedar poles, chestnut poles, southern pine poles, lodgepole pine poles, and Douglas fir poles, the standards represent a rational uniform standardization system for the six major pole timbers of the United States.

### DICKE TOOL CO., Inc.

DOWNERS GROVE, ILL.

Manufacturers of

Pole Line Construction Tools

*They're Built for Hard Work*

## Egry's Engineering Service For Business Forms

**T**HE flow of raw materials in and finished products out of production lines has been given much study. Likewise the flow of traffic inside an office. Departments have been rearranged, relocated, consolidated, to make office routine more economical, more efficient.

The requirements of modern business forms have been the subject of careful analysis by The Egry Register Company, Dayton, Ohio. Sizes are revised to:

1. Reduce the quantity of paper used;
2. Save on postage;
3. Eliminate the necessity for folding forms before inserting in envelopes;
4. Cut down filing space.

Time and motion studies are made by Egry form designers to determine where printed captions should go to minimize the number of carriage shifts by the operator. The printing of standard information eliminates hundreds of typewriter strokes.

Engineering of business forms and resultant revisions have proved a source of economy in many businesses. Utilities might find it to their profitable advantage to investigate Egry Register Company form engineers' service which entails no obligation.

## Inkless G-E Recorder

**A** NEW low-chart-speed recorder, which telescopes 30-day load and voltage surveys formerly requiring 60-foot strip charts into a chart only 30 inches long, has been announced by the Meter Division of the General Electric Company.

The new instrument, an addition to G-E's Type CF line of inkless recorders, has a chart speed of only one inch per day. Thus, the operating record for an entire month can be checked at a glance, and the spread of current or voltage, as well as the duration of maximum and minimum values, is immediately obvious.

In many central-station and industrial applications the new low-chart-speed recorder will probably be used in conjunction with a higher chart-speed recorder. Unusual conditions indicated on the 30-inch chart can then be located quickly and studied more closely on the regular 60-foot chart.

## Vibration Insulators

**D**ESIGNED for specialized services, three additional new vibro-insulators, mountings of rubber and metal to isolate vibration are announced by The B. F. Goodrich Company, Akron, Ohio.

Type 44 is for use with gas burners, Type 50 specially engineered to isolate internal combustion engines against torsional vibration and Type 60 for isolating the vibration and noise of exhaust and intake fans.

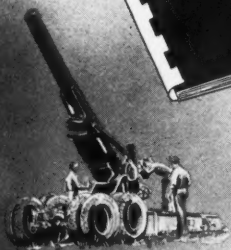
*Mention the FORTNIGHTLY—It identifies your inquiry*

*Just off  
the Press!*



● This attractive 32-page color-lithographed brochure graphically portrays many installations of Pennsylvania Transformers. It is a pictorial presentation of how Pennsylvania, in supplying power to America's major industries, is playing a vital role in today's national defense program.

*Operating engineers will find these installations of unusual interest. Write for your copy!*



*Pennsylvania* TRANSFORMER COMPANY

308 RIDGE AVENUE, N. S., PITTSBURGH, PA.

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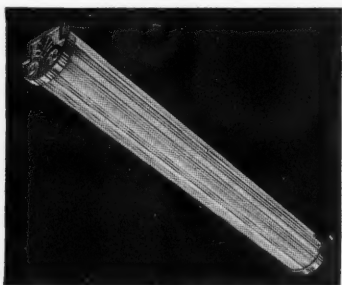
## Indianapolis Utility Plans Additional Capacity

A **N** improvement program costing \$2,000,000 has been announced by the Indianapolis Power & Light Company.

A new \$37,500 kw turbo-generator has been ordered from the General Electric Company for delivery in June, 1943, for installation at the Harding Street plant. A duplicate unit was scheduled for operation this month. Originally the plant had two turbo-generators of 36,650 kw each.

## Glass Surface Troffer

**N**EW Guth "G-S-T" Glass Surface Troffers recently announced by Edwin F. Guth Co., St. Louis, Mo., are totally enclosed fluorescent luminaires for one or two rows of



*Totally Enclosed Luminaire*

lamps that provide high operating efficiency, flexibility, and convenient maintenance features. The new units have Guth "light-saver" reflectors with a "V" design between lamps and a modified "V" between lamps so that "pocketed" light is minimized. For more efficient operation the one-light Glass Surface Troffers are supplied in combination of Base and Extension units.

The enclosing glass is easily removed without use of tools or tension. The glass covers quickly slip in or out of the luminaires whether the fixtures are individually or continuously mounted. "G-S-T" Reflectors are also removable so that all parts of the fixtures are conveniently accessible for cleaning or servicing.

## G-E Automatic Iron

A **N**EW automatic iron, called the "Aluron," with controlled steam is announced by the heating device section of the General Electric Company in Bridgeport, Conn. The new iron is being manufactured in Ontario, Calif., where G-E has the world's largest iron factory. This factory recently produced its 20-millionth iron. All kinds of fabrics may be ironed with the new iron. The amount of steaming is easily varied to suit the fabric or stopped by a turn of a knob on the handle.

## Timken Develops Gear Shift

A **N**EW type of gear shift for two-speed rear axle drives has been developed by The Timken-Detroit Axle Co., Detroit.

Known as Timken "Easy-Shift" the new method is the result of a revolutionary design of spline teeth which allows an instantaneous engagement of the shift collar with the desired spur pinion at synchronized speeds. With the new design of spline teeth, gear shifts can be made without declutching in most instances with a little practice.

Not only is the shifting made unbelievably easy for manual control but it is now possible for the first time to utilize remote control power shifting—vacuum, compressed air, or mechanical.

## New Material for Roasters

**C**ERTAIN changes in materials used in General Electric roasters and utensils and in accessories for electric ranges, conforming with the request by the Office of Production Management to conserve aluminum, have been announced by the G-E appliance and merchandise department, Bridgeport, Conn. Beginning with mid-summer production, the smaller of the two G-E roaster models will be supplied with glass utensils only, and will be equipped with a black enamel lid. The larger roaster will henceforth be equipped with a white enamel lid, but will continue to be available with a choice of glass, pottery, or enamel utensils.

Changes in materials also are being made on the "C" and "D" lines of General Electric ranges without affecting the present high efficiency. Although the use of new materials represents increased costs, there will be no increase in range prices at the present time, according to the manufacturer.

## Manufacturers' Notes

### Kelvinator Appointments

The Kelvinator Division of the Nash-Kelvinator Corp., Detroit, recently appointed Dan Packard Eastern sales manager. Formerly Mr. Packard was manager of major dealer sales for Frigidaire Division of General Motors Corp.

C. J. Barkman has been appointed Pacific Coast sales manager for Kelvinator. Mr. Barkman previously was Dallas zone manager.

### Marmon-Herrington Expands

When an expansion program now under way is completed the plant buildings of the Marmon-Herrington Company at Indianapolis will cover approximately half the sixteen acres of the company's property within the city limits.

The new construction program involved the extension of the original truck assembly build-

*Mention the FORTNIGHTLY—It identifies your inquiry*



# Water Meters GREATLY REDUCE Water waste!

## What Water Meters Do

Greatly reduce  
water waste

- Keep down  
pumping costs

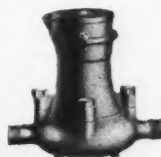
- Conserve  
water reserves

- Distribute water  
costs fairly

- Reduce  
water rates

**W**HEN he knows he pays for all he wastes, the average consumer is careful about the water he uses. He will correct faulty plumbing, turn off water when he is through using it, and think twice before he lets it run for refrigeration and prevention of pipe freezing.

Recent evidence to this effect comes from Scottsburg, Indiana. There, by 100% metering, along with an educational program, their pumpage was reduced 30%.



## Trident Water Meters

Are thoroughly dependable in design, construction, operation

Have interchangeable parts, minimizing maintenance, avoiding obsolescence

Have established new standards of accuracy in testing on low flows, whether new or repaired. Of the plus-6-million made and sold, the great majority are still in service.



NEPTUNE METER COMPANY • 50 West 50th Street • NEW YORK CITY

Branch Offices in CHICAGO, SAN FRANCISCO, LOS ANGELES, PORTLAND, ORE., DENVER, DALLAS, KANSAS CITY, LOUISVILLE, ATLANTA, BOSTON

Neptune Meter, Ltd., 141 Bloor Street, Toronto, Canada

1

- One of a series of advertisements outlining the five ways in which Water Meters increase operating efficiency, reduce costs and add to the revenue of the modern Water Works.

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ing to approximately twice its length, an entirely new floor on the administration building to house the expanded engineering and drafting departments, and the doubling in size of the machine shop building where parts for Marmon-Herrington All-Wheel-Drive trucks, track-laying tractors and tanks are machined and finished.

A new assembly line building has been erected for tractors and tanks, the same size as the enlarged original building; another building almost as large, for crating and shipping Marmon-Herrington units.

Four additional separate building projects are nearing completion, one of which will be used as an engineering and experimental development department.

Marmon-Herrington All-Wheel-Drive trucks are built in all sizes, with gross load capacities up to 35 tons, and in addition to the regular line, the company converts all standard Ford trucks and passenger cars to All-Wheel-Drive in its Indianapolis plant. Both four wheel drive and six wheel drive models are available.

#### **Eureka Advancements**

In line with its program of expansion and development the Eureka Vacuum Cleaner Company recently announced several changes in personnel and offices.

E. A. Evens succeeds Clark Bennett, resigned, as treasurer-comptroller. Formerly Mr. Evens was vice-president and treasurer of the American Gas Machine Company.

A new divisional office in Buffalo, under supervision of E. E. Sullivan will operate under the company's regional office in Pittsburgh, Pa. New offices also have been opened in Minneapolis, Minn.

#### **Harvester Promotes Kline**

J. H. Kline has been appointed manager of the International Harvester Company's motor truck sales branch for the Greater New York area, it was announced recently by R. C. Archer, domestic sales manager of the company. Mr. Kline, who has been manager of the company's motor truck sales branch at West Haven, Conn., succeeds the late Frank J. Harmon.

#### **Hygrade Reduces Prices**

Hygrade Sylvan's Corporation recently announced reductions totaling approximately 15 per cent in the price of fluorescent lamps.

Fluorescent lamp prices have been cut practically in half within a period of 17 months. As in the case of incandescent lamps, the product is being constantly improved while prices are being constantly lowered.

Price reductions were also announced on Hygrade three-light incandescent lamps and R-40 flood and spot reflector lamps.

#### **Dodge Advances Miller**

Allison Miller has been named assistant sales manager of the Dodge Brothers Corporation

truck division. He was formerly Philadelphia regional manager for Dodge.

#### **G-E Distributors**

The Goodyear Tire and Rubber Co., Inc., with warehouses at Arkon, Boston, Chicago, Dallas, Denver, Kansas City, Los Angeles, Portland, Port Newark, N. J., and Gadsden, Ala., has been appointed a distributor for General Electric heating devices and clocks.

The Myer-Bridges Co., Louisville, Ky., has been appointed a distributor for G-E electric clocks.

#### **Pittsburgh Meter Company Expands**

The Pittsburgh Equitable Meter Company has acquired the assets of the Larsson Machine Tool Works of Berkeley, California, according to a recent announcement. This acquisition provides the Pittsburgh firm with a modern self contained tool plant fully equipped to manufacture dies, tools and special equipment. It was stated that the present business would be continued and that these additional facilities would also be utilized for experimental work on a number of new products which are under development.

#### **Copperweld Appointments**

Copperweld Steel Company announces the election of Thomas F. Troxell as treasurer and a director. Mr. Troxell has been a partner of the investment banking firm of Riter & Co., New York.

C. Walter Holmquist, formerly general superintendent, has been made vice president in charge of plant operations, Glassport division.

#### **G-E Opens Plastic Plant**

The fifth plant of the General Electric Company for the manufacture of plastic parts has been placed in operation at Taunton, Mass. The plant, which will add approximately 25 per cent to the company's plastic production and will be the third largest molding plant in the United States, was started to make plastic parts to replace those formerly fabricated from materials now required for the defense program.

## **Equipment Literature**

#### **Protective Gaps**

Protective gaps for distribution circuits are described in a new 8-page booklet recently issued by the Westinghouse Electric and Manufacturing Company.

Application, construction, identification, and ordering information are outlined whereby maximum protection may be obtained by the three-point protection principle on distribution circuits.

A copy of the booklet (descriptive data 38-190) may be secured from department 7-N-20,

*Mention the FORTNIGHTLY—It identifies your inquiry*

# Doctors Don't Guess

## Why Should You?

It takes more than a superficial examination to find the strength and weakness of Unit Heaters, too.

You're buying HEAT not ornaments, so don't stop at the housings (they're all smartly styled). Performance depends upon what's inside.

Outstanding among all Thermolier features is an efficient *Internal Cooling Leg*, integral with the unit. It removes condensate *continuously* instead of intermittently; keeps *all* of the heater working all the time; eliminates "air binding" and hammer; permits use of simple thermostatic trap and is equal in actual cooling effect to *more than 100 feet* of exterior cooling piping.

This one feature *alone* places Thermoliers ahead of all other unit heaters in heating efficiency. Send for complete Data Book explaining Thermolier features. Grinnell Co., Inc., Executive Offices, Providence, R. I. Branch offices in principal cities of the U. S. and Canada.

• • •

### OTHER THERMOLIER ADVANTAGES:

- 1 *U-Shaped Tubes* eliminate expansion strains the simplest way . . . insure dependability.
- 2 *Positive Built-In Drainage* - every tube is pitched for complete drainage of condensate.
- 3 *Superior Fin Design* - square fins instead of round - 24% more radiating surface. Dirt and lint collection is reduced to a minimum.

DeLuxe

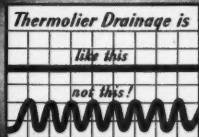
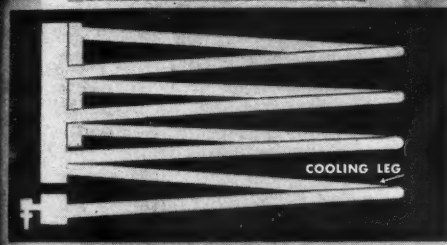
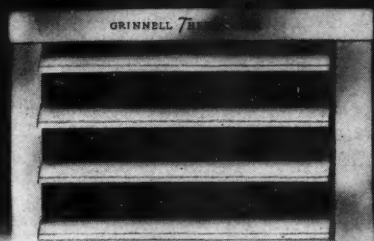
Industrial

Factory



# GRINNELL THERMOLIER

THE UNIT HEATER WITH 14 POINTS OF SUPERIORITY



Westinghouse Electric and Manufacturing Company, East Pittsburgh, Pennsylvania.

#### **Electric Heat in Industry**

Published by the General Electric Co. and issued periodically to industrials through power companies, this 8-page illustrated bulletin contains interesting accounts of applications where savings in both time and money are being made through the application of electric heat to specific problems in a wide range of industries.

The issue for the Second Quarter, 1941, features an article on Drycolene, the gas for no decarburization.

#### **Immersion-o-matic Water Heater**

Facts about an immersion-o-matic water heater, approved by A. G. A. are given in a circular issued by the manufacturers, The Sellers Engineering Co., Chicago, Ill. The storage tank (capacities vary from 90 to 592 gal.) has alloy tubes welded into place. The tubes are guaranteed against corrosion failure for a period of two years—unless used with softened water. A new set of tubes will be furnished without charge—the customer to install them. When a steam coil is furnished, special corrosion resistance iron alloy is used.

#### **Insulating Materials**

A new 60-page catalog containing full information on the entire G-E line of insulating materials has been published by the Glyptal and insulating materials sales section of the General Electric appliance and merchandise department, Bridgeport, Conn. The catalog lists prices, and describes hundreds of items, including different varnished cloths, varnishes, Glyptals, tapes, cords, sleeves, varnished tubings, mica materials, wedges, and soldering materials.

#### **Fluorescent Fixture**

A new, lower cost, Hygrade industrial fluorescent unit is announced in a recent bulletin issued by the Miralume Division of the Hygrade Sylvania Corp., Ipswich, Mass. Designated Miralume F-235 the unit has two Hygrade 100-watt fluorescent lamps which give a lumen output of over 8400. The reflector is a single piece of 20 U. S. gauge metal. A latch assembly connects the reflector top with the housing and permits easy maintenance.

#### **Shielded Fluorescent Unit**

A 200-watt 4-light shielded type fluorescent fixture for store, office and general commercial use is described in Bulletin No. 239, issued by Mitchell Mfg. Co. of Chicago.

This new fluorescent fixture (Model 2031) is said to offer the advantages of low surface brightness, minimum light absorption, higher efficiency light transmission, and lowered down light punch.

#### **Feed Water Chemistry**

Feed Water Chemistry is the title of a twelve-page booklet issued by the Cochran Corporation, Philadelphia, giving the fundamental reactions involved in water softening. The information in this technical publication should prove helpful in the interpretation of a water analysis. The book deals particularly with the "Ionic analysis" and with "equivalents per million" since these methods of interpreting water analysis are coming into more general use.

#### **PCC Cars**

Basic principles of PCC car equipment operation are described in a new 40-page booklet announced by the Westinghouse Electric and Manufacturing Company.

A comparison between the older type of street car and the PCC car as to the eye appeal, safety, and acceleration is given in non-technical language. The use of motor braking to a speed of 4 miles per hour and then the application of air brakes to bring the car to a dead stop is also discussed.

A copy of this booklet, R-994, may be secured from department 7-N-20, Westinghouse Electric and Manufacturing Company, East Pittsburgh, Pa.

#### **Recent Allis-Chalmers Bulletins**

The following three publications have just been issued by Allis-Chalmers Manufacturing Co., Milwaukee, Wisc.:

#### **Network Transformers**

A profusely illustrated 16-page bulletin B-6152 on transformers for secondary A-C network systems, covering equipment especially suited for use in congested urban districts having high density loads. This new booklet includes, not only outline sketches, installation and shop assembly views, but many construction details of both standard and special network transformers.

#### **Induction Motors**

Bulletin (B-6132) shows latest induction motor construction for bracket and pedestal types of 250 hp. and larger, and chart showing range of each type. It not only covers standard motors but those with special protective features such as drip-proof, splash-proof and enclosed designs. It includes tables giving general characteristics, and curves showing variations of power factors and starting torques with different motor rated speeds. Several pages are devoted to induction motor control.

#### **Switch Houses**

A Bulletin (B-6142) is on metal-enclosed outdoor switch houses for feeder or line protective switching equipment. Profusely illustrated, it gives construction features, application data, dimensions and typical design arrangements.

**Mention the FORTNIGHTLY—It identifies your inquiry**

## Customer Usage Data

- At Lower Cost
- In Less Time
- With Greater Accuracy

### THE ONE-STEP METHOD



### OF BILL ANALYSIS

R & S Bill Frequency Analyzer: developed for our Utility Rate Service. The kw.-hrs. billed are entered on the adding machine keyboard. A tape is prepared of all items and a consumption total accumulated which serves as a control. At the same time—through this *single* operation—the bill count for each kw.-hr. step is made by the electrically controlled accumulating registers.

- A continuance of frequent rate changes—the necessity of checking load-building activities—the pressing need for current data on customer usage—are but a few of the reasons many Companies are using R & S ONE-STEP METHOD to analyze and compile information required for scientific rate making. They have not only reduced the costs on this work to an average of one-fifth of a cent per item, but have obtained monthly or annual bill-frequency tables in a few days instead of weeks and months.
- Write for your copy of "The One-Step Method of Bill Analysis," an interesting booklet which describes briefly how these savings are accomplished.

## Recording & Statistical Corporation

Utilities Division

102 Maiden Lane, New York, N. Y.

Boston

Chicago

Detroit

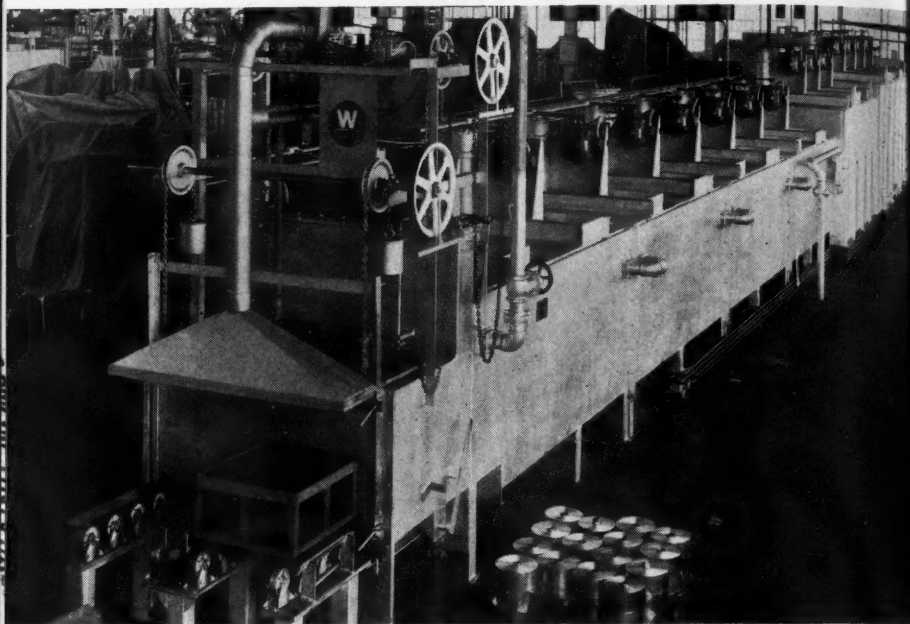
Montreal

Toronto

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# New load from electric furnace



**R**ECENT improvements in Westinghouse return recuperative electric furnaces cut operating costs and make electric equipment more attractive to industrialists, thus helping to build new loads for central stations. Similar improvements are constantly being made in all types of Westinghouse generation and distribution equipment, motors and control, meters and lighting apparatus. All these Westinghouse developments make power production and utilization more efficient and dependable, resulting in greater consumer satisfaction and added load for you.

*Westinghouse activities in research, in the manufacture, distribution and application of apparatus, and in promoting the use of electricity, result in better service to you and a wider use of electricity by your customers. They have been made possible and are continually encouraged by your purchases of Westinghouse apparatus.*

WESTINGHOUSE ELECTRIC & MANUFACTURING COMPANY, EAST PITTSBURGH, PA.

# Westinghouse

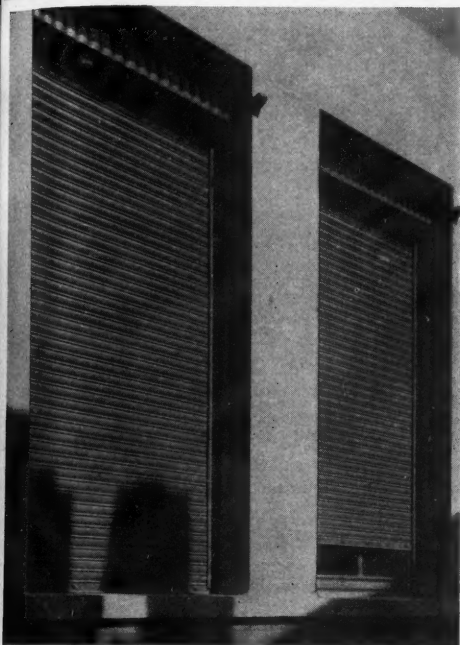
ELECTRICAL PARTNER OF THE CENTRAL STATION INDUSTRY



Kinn  
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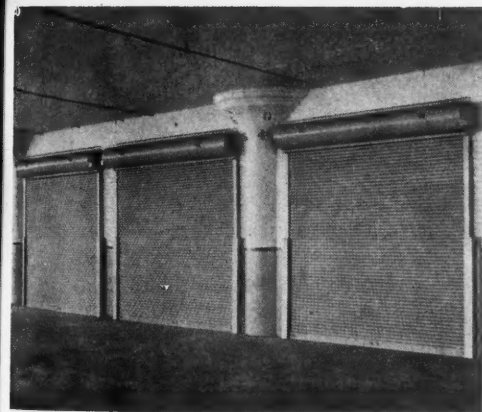
SA  
IN



## STOP FIRE IN ITS TRACKS

When fire breaks out, your greatest danger is from the swift spreading of flames through open or unprotected doorways, windows, corridors, etc. Strong drafts can carry fire out of control with appalling speed. But you can stop fire dead in its tracks with Kinnear "Akbar" Rolling Fire Doors and Shutters. They're fireproof, automatic . . . of rugged, all-steel construction . . . equipped with a strong push-down starting spring that makes them positive in action. And they're thoroughly approved by the Underwriters' Laboratories! They're also safe. Through a special counter-balance, they can be opened after automatic closure; and their downward speed is controlled to guard against injury to persons passing underneath the doors at the time of automatic release. But get the complete story . . . write Kinnear today. Check the advantages of protecting your property

*with*  
**KINNEAR**  
*Rolling*  
**FIRE DOORS**



Kinnear Rolling Fire Doors and Shutters are built to fit openings of any size or type. Frequently, all working parts can be concealed within the wall, completely out of view. Doors may also be equipped for regular, daily service use if desirable. Write for details.

The Kinnear Mfg. Co.

2060-80 Fields Ave.

Columbus, Ohio

**SAVING WAYS  
IN DOORWAYS**

**KINNEAR**  
ROLLING DOORS

# Considering

## EXPANSION? REPLACEMENT?



**E. T. L.** service can give important aid to utilities contemplating new equipment purchases for either replacement or necessary expansion.

All of our extensive facilities are at your command . . . plus an experienced, specially trained staff to help you meet nearly all the testing problems which confront the modern utility.

We supplement your own research department. We check performance and quality of new equipment against your own specifications before installation . . . help you save needless waste and expense . . . and you avoid heavy investment in special testing equipment.

*Know by Test!*



**ELECTRICAL  
TESTING  
LABORATORIES**

East End Avenue and 79th Street  
New York, N. Y.



## Wage-Hour Manual 1941 Edition

Don't get into a jam with the wage and hour inspectors. Today there are seven times as many field men as a year ago. They are looking for errors in record keeping, for violations of minimum-wages, overtime, unnecessary exemptions.

Inspectors report that most employers mean to comply, that the tremendous number of violations are the result of inaccurate information. Be certain that you are right, that you have the correct and latest regulations and interpretations.

Wage and Hour Manual (1941 Edition) is just coming off the press. It goes into every regional office of the Wage and Hour Division. This Manual is so well organized, so complete and thorough that it is used by the Division in training new inspectors.

### Widely Used

Already over 4000 corporations have ordered this new, up-to-date summary of all phases of wage and hour regulations.

Over 300 specific questions are officially answered, can save you much embarrassment and explanation.

Send for your copy today

**Bureau of National Affairs, Inc.**  
2225 M Street, N. W., Washington, D. C.

Send me the 1941 Edition of Wage and Hour Manual at \$5.00

( ) \$5.00 is enclosed. Or ( ) Send C.O.D. and I'll pay the few extra cents collection charge.

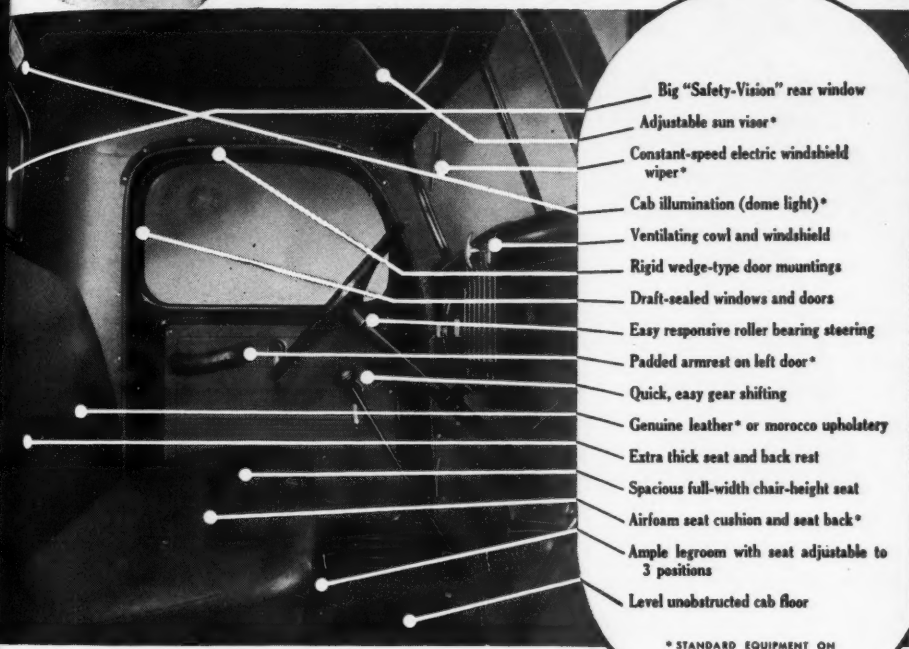
Name ..... Business .....

City ..... State .....

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# TRUCK DRIVERS EVERYWHERE AGREE!

New Dodge Truck Cabs Make Their Job Easier



- Big "Safety-Vision" rear window
- Adjustable sun visor\*
- Constant-speed electric windshield wiper\*
- Cab illumination (dome light)\*
- Ventilating cowl and windshield
- Rigid wedge-type door mountings
- Draft-sealed windows and doors
- Easy responsive roller bearing steering
- Padded armrest on left door\*
- Quick, easy gear shifting
- Genuine leather\* or morocco upholstery
- Extra thick seat and back rest
- Spacious full-width chair-height seat
- Airfoam seat cushion and seat back\*
- Ample legroom with seat adjustable to 3 positions
- Level unobstructed cab floor

\* STANDARD EQUIPMENT ON  
DELUXE CABS

## AMERICA'S NO. 1 TRUCK CAB...

*another reason why Dodge Job-Rated Trucks are better*

• The quality of a Dodge *Job-Rated* truck cab is typical of the quality of the entire truck. For proof, examine a Dodge truck ... stem to stern. But look at other trucks, too! Be impartial ... but be inquisitive ... and fair.

Conduct your comparison completely: Include the engine—its power and economy; check the quality of the clutch, transmis-

sion, rear axle, brakes, springs, and frame!

All these features must be top quality and sized to handle your hauling job.

They are in Dodge *Job-Rated* trucks ... trucks that are sized and built throughout to fit the job ... to cut your hauling costs! See your Dodge dealer now for a good "deal" ... liberal trade-in allowance ... easy budget terms.

PRICES AND SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

## DEPEND ON DODGE *Job-Rated* TRUCKS

*Job-Rated* MEANS: A TRUCK THAT FITS YOUR JOB!



"It's a *Robertshaw* heat control—a marvel of streamlined efficiency. You turn on the fuel and set the control with one single motion. To turn it off you return the control to zero. Simple? Yes, and *sure*—the only control you *can't* forget to set!"

*The simpler the control  
the easier to use,  
the quicker to sell!*

FOR GAS AND ELECTRIC RANGES

# ROBERTSHAW HEAT CONTROLS

ROBERTSHAW THERMOSTAT COMPANY, YOUNGWOOD, PA.

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To Get the PIPE in the Ground . . .

Use **"CLEVELANDS"** and  
*Watch Your Costs Go Down !*

## For All-round Gas Trenching— the "MODEL 95"

The Famous "Baby Digger" pioneered and perfected by "Cleveland" known and used every day by Gas Companies the country over.

Answers every requirement for distribution work. An unbeatable combination of speed, maneuverability, power and ditch-capacity, in a small mobile unit. Digs 11" to 23" in width. 5½' in depth.

## for { 1. Laying Pipe 2. Filling and Compacting Trenches the "MODEL 80"

The "80" applies machine-savings to the pipelaying and backfilling operations. Speeds up the work, does a 100% job of trench-compacting at much lower costs. Works in limited spaces.

A machine of such genuine utility, you'll wonder how you ever got along without it.

## and NOW!

## A STILL SMALLER TRENCHER FOR SERVICE AND SMALL DIAMETER PIPE— the "MODEL 75"

The latest "Cleveland" achievement, the "75" weighs but 7000 pounds! Is only 45 inches wide! Digs 8 to 12 inches width, 3½ feet depth. At last! A tiny trencher, for small trench, that has the required strength and durability.

Ask for Information TODAY on These Modern Machines

**THE CLEVELAND TRENCHER COMPANY**

*"Pioneer of the Small Trencher"*

20100 St. Clair Ave.

Cleveland, Ohio

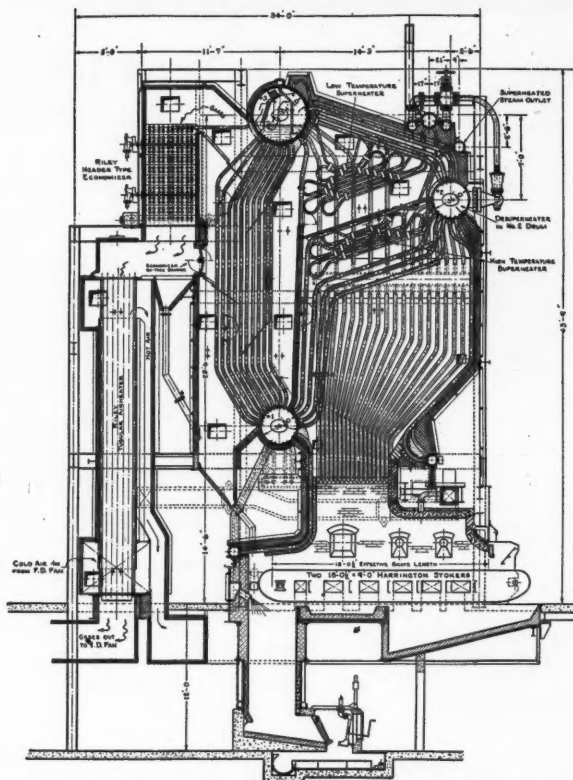


**CLEVELANDS**



# RILEY STEAM GENERATING UNIT

*Outstanding American  
Lignite Burning Installation*



OTTER TAIL POWER COMPANY, Wahpeton, N. D.

130,000 lbs. steam/hour, 650 lbs. design pressure, 825° F steam temp.  
Unit burns North Dakota Lignite at 82% Efficiency.

Riley Boiler, Superheater, Steam-temperature Control, Economizer,  
Air Heater, Water Cooled Furnace, Steel Clad Setting, Riley  
Harrington Stoker.

## RILEY STOKER CORPORATION

WORCESTER, MASS.

BOSTON NEW YORK PHILADELPHIA PITTSBURGH BUFFALO CLEVELAND DETROIT SEATTLE  
ST. LOUIS CINCINNATI HOUSTON CHICAGO ST. PAUL KANSAS CITY LOS ANGELES ATLANTA

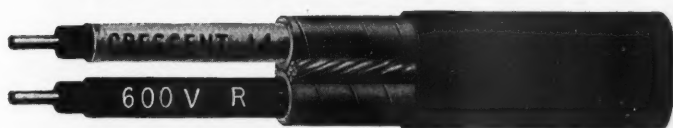
### COMPLETE STEAM GENERATING UNITS

BOILERS - SUPERHEATERS - AIR HEATERS - ECONOMIZERS - WATER-COOLED FURNACES  
PULVERIZERS - BURNERS - MECHANICAL STOKERS - STEEL-CLAD INSULATED SETTINGS

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# CRESCENT CRESFLEX

NON-METALLIC SHEATHED CABLE



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# INDEX TO ADVERTISERS

[The Fortnightly lists below the advertisers in this issue for ready reference. Their products and services cover a wide range of utility needs.]

## A

American Appraisal Company, The .....	56
American Coach & Body Co. ....	37

## B

Babcock & Wilcox Co. ....	16-17
Barber Gas Burner Company, The .....	3
Barker & Wheeler, Engineers .....	57
Bayer Company, The .....	30
Black & Veatch, Consulting Engineers .....	57
*Brown, L. L. Paper Co. ....	
Burroughs Adding Machine Co. ....	13

## C

Carpenter Manufacturing Company .....	36
Carter, Earl L., Consulting Engineer .....	57
Cheney, E. J. and Co., Engineers .....	57
Chevrolet Motor Division of General Motors Sales Corp. ....	35
Cities Service Petroleum Products .....	
Inside Back Cover	
Cleveland Trencher Company, The .....	53
*Combustion Engineering Company, Inc. ....	
Connelly Iron Sponge & Governor Co. ....	20
Crescent Insulated Wire & Cable Co., Inc. ....	55

## D

Davey Tree Expert Company .....	28
Day & Zimmermann, Inc., Engineers .....	56
Dicke Tool Company, Inc. ....	40
Ditto, Inc. ....	25
Dodge Division of Chrysler Corp. ....	51

## E

Egry Register Company, The .....	21
*Ehret Magnesia Manufacturing Co. ....	
Electric Storage Battery Company, The .....	31
Electrical Testing Laboratories .....	50
Elliott Company .....	34
Ethyl Gasoline Corporation .....	39

## F

Foley, Robert E., Erecting Engineers .....	57
Ford, Bacon & Davis, Inc., Engineers .....	56
*Ford Motor Company .....	

## G

General Electric Company .....	Outside Back Cover
*Graver Tank & Mfg. Co., Inc. ....	
Grinnell Company, Inc. ....	45

## H

Haberly, Francis S., Engineer .....	57
Hoosier Engineering Company .....	18

## I

International Harvester Company, Inc. ....	26
--	----

Professional Directory ..... 56-57

\* Fortnightly advertisers not in this issue.

## J

Jackson & Moreland, Engineers .....	57
Jensen, Bowen & Farrell, Engineers .....	57
Johns-Manville Corporation .....	27

## K

Kerite Insulated Wire & Cable Co., Inc., The .....	26
Kinnear Manufacturing Company, The .....	49

## M

Manning, J. H. & Company, Engineers .....	56
*Marmon-Herrington Co., Inc. ....	
Martens & Stormoen .....	38
Mercor Nordstrom Valve Company .....	32
Mercoid Corporation, The .....	23

## N

National Affairs, Bureau of .....	50
Neptune Meter Company .....	49
Newport News Shipbuilding & Dry Dock Company .....	29

## P

Pennsylvania Transformer Company .....	41
Pittsburgh Equitable Meter Company .....	32
Pittsburgh Plate Glass Company .....	22

## R

Railway & Industrial Engineering Company .....	15
Recording & Statistical Corp. ....	47
Remington Rand, Inc. ....	9
Ridge Tool Company, The .....	5
Riley Stoker Corporation .....	54
Robertshaw Thermostat Company .....	52

## S

Sanderson & Porter, Engineers .....	56
Sangamo Electric Company .....	28
Sargent & Lundy, Engineers .....	56
Silex Company, The .....	Inside Front Cover
Sloan & Cook, Consulting Engineers .....	57
Sprague Meter Company, The .....	20
Stone & Webster Engineering Corporation .....	57

## T

Thornton Tandem Co. ....	19
Timken-Detroit Axle Co., The .....	33

## V

Vulcan Soot Blower Corp. ....	11
-------------------------------	----

## W

Westinghouse Electric & Mfg. Co. ....	48
Wiegand, Edwin L., Company .....	7
Wopat, J. W., Consulting Engineer .....	57

4, 1941

57  
57  
27

he... 26  
49

56  
38  
36  
23

56  
43  
om-  
29

41  
32  
22

15  
47  
9  
5  
54  
52

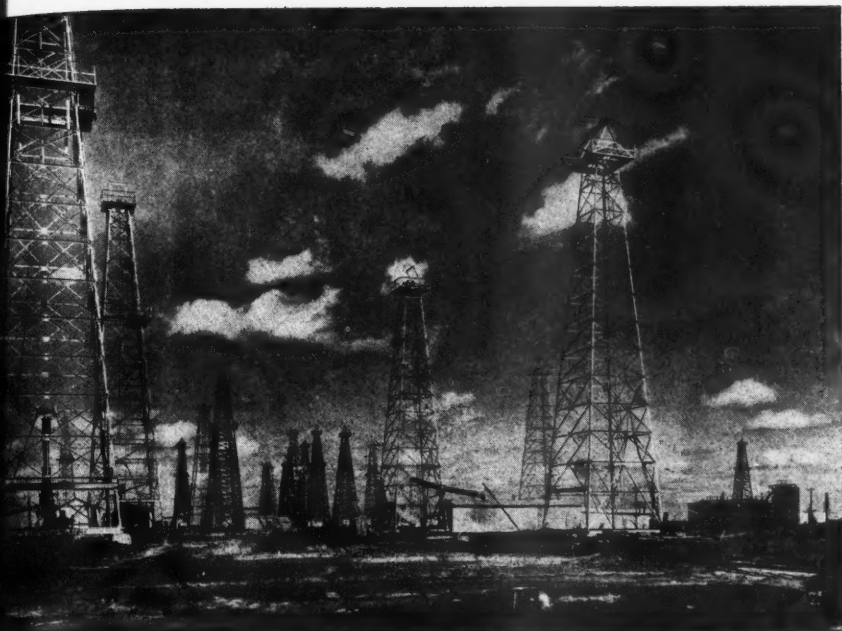
56  
28  
56  
Cover  
57  
20  
57

19  
33

11

48  
7  
57





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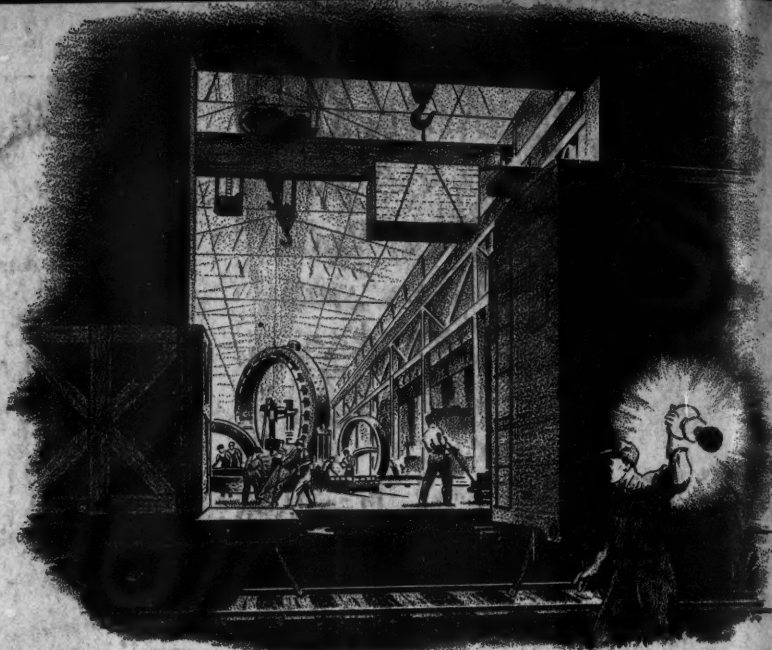


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